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A STUDY OF SELECTED ADMINISTRATIVE BEHAVIORS AMONG ADMINISTRATORS FROM INNOVATIVE AND NON-INNOVATIVE PUBLIC SCHOOL DISTRICTS. FINAL REPORT.

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MICHIGAN ST. DEPT. OF PUBLIC INSTR., LANSING

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DATA FROM 20 REPRESENTATIVE MICHIGAN SCHOOL DISTRICTS (FIVE INNOVATIVE AND FIVE NONINNOVATIVE WITH A HIGH-COST FACTOR AND FIVE INNOVATIVE AND FIVE NONINNOVATIVE WITH A LOW-COST FACTOR) WERE STUDIED TO DETERMINE THE RELATIONSHIP BETWEEN SCHOOL SYSTEM INNOVATIVENESS AND ADMINISTRATIVE BEHAVIOR. QUESTIONNAIRE RESPONSES WERE RECEIVED FROM 109 OF 116 SUPERINTENDENTS AND PRINCIPALS WHO HAD SERVED FOR THE PREVIOUS THREE YEARS, AND STRUCTURED INTERVIEWS WERE HELD WITH ALL 20 SUPERINTENDENTS. CHI SQUARE ANALYSIS AND THE FISHER EXACT PROBABILITY TEST WERE USED TO TEST HYPOTHESES RELATING SCHOOL SYSTEM INNOVATIVENESS TO SEVEN SELECTED ADMINISTRATIVE BEHAVIORAL DIMENSIONS--EXPERIENCE, PREPARATION, ORGANIZATIONAL INVOLVEMENT, PROFESSIONAL READING, INFORMATION SOURCES USED, INVOLVEMENT OF TEACHING STAFF IN CURRICULUM CHANGE, AND RECOGNITION OF TEACHING STAFF'S WORTH AND DIGNITY. ANALYSIS INDICATED THAT ADMINISTRATORS IN INNOVATIVE SYSTEMS DIFFER PRIMARILY FROM THOSE IN NONINNOVATIVE SYSTEMS IN FIVE WAYS--(1) THEY RELY UPON A GREATER NUMBER OF INFORMATION SOURCES FOR NEW CURRICULUM PRACTICES, (2) THEY HAVE MORE YEARS OF SCHOOL ADMINISTRATION EXPERIENCE, (3) THEY HAVE MORE YEARS OF TOTAL PROFESSIONAL EDUCATIONAL EXPERIENCE, (4) THEY ALLOW GREATER INVOLVEMENT OF THEIR TEACHING STAFFS IN CURRICULUM CHANGE, AND (5) THEY SHOW GREATER RECOGNITION OF THEIR TEACHING STAFF'S WORTH AND DIGNITY. IMPORTANCE OF THE COST FACTOR AS A DETERMINING VARIABLE WAS MINIMAL. (JK)

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A Study of Selected Administrative Behaviors Among Administrators from Innovative and Non-Innovative Public School Districts

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ABSTRACT

A STUDY OF SELECTED ADMINISTRATIVE BEHAVIORS AMONG ADMINISTRATORS FROM INNOVATIVE AND NON-INNOVATIVE PUBLIC SCHOOL DISTRICTS

by Allen Jay Klingenberg

The purpose of this study was to collect and analyze empirical evidence concerning differences between public school administrators from innovative and non-innovative school districts on selected administrative behavioral dimensions. This study developed from the descriptions of innovative and non-innovative school administrators found in the educational and general innovation literature.

Twenty public school systems were selected for study from the extreme ends of the distribution of Constructed Innovative Scores developed by John W. Childs. Childs used the data reported to the Michigan Department of Public Instruction in the Five Years Survey of Progress in Michigan School Districts to develop a rank ordered innovative list of all Michigan K-12 public school districts. The school districts selected from the extreme ends of the innovation scale were chosen on the basis of four educational cost factors. These cost factors were school district: enrollment, utilization of operational millage, expenditure per pupil,

and state equalized evaluation. On the basis of these cost factors the districts in the sample were identified as being innovative or non-innovative and as being high cost factor or low cost factor districts.

The hypotheses in general research forms were:

1. Administrators in innovative school systems will earn a greater number of semester hours beyond the bachelor's degree than those in non-innovative systems.
2. Administrators in innovative school systems will indicate more organizational involvement than those in non-innovative systems.
3. Administrators in innovative school systems will use a greater number of information sources than those in non-innovative systems.
4. Administrators in innovative school systems will have more years of experience as educators than those in non-innovative systems.
5. Administrators in innovative school systems will read more professional journals than those in non-innovative systems.
6. Superintendents in innovative school systems will use wider teaching staff involvement when instituting new curriculum practices than those in non-innovative systems.

7. Superintendents in innovative systems will recognize the worth and dignity of their teaching staff members more when instituting new curriculum practices than those in non-innovative systems.

Part of the data was collected by a specially constructed survey instrument which proved highly reliable using the test-retest method. The remainder was collected by a non-structured interview technique.

The chi-square analysis and Fisher Exact Probability Test were used to test the hypotheses. The first two hypotheses were neither supported nor rejected at the .05 level. The third hypothesis was supported with a significant chi-square value at the .05 level. This indicates that administrators from innovative systems use more sources of information for new curriculum practices than those in non-innovative systems. The fourth hypothesis was also supported with a significant chi-square value at the .05 level. This indicates that administrators from innovative systems have more years experience as educators in general and administrators in particular than those in non-innovative systems. The fifth hypothesis was neither supported nor rejected by the data examined.

The sixth hypothesis was supported with a significant Fisher value at the .05 level. This indicated that superintendents from innovative systems use wider teaching staff involvement in curriculum change than those in non-innovative systems. The data indicates this was particularly true at the awareness and decision-making phases of the curriculum change process.

The seventh hypothesis was also supported with a significant Fisher value at the .05 level. This implied that superintendents from innovative systems recognize the worth and dignity of their teaching staff more on the fifteen examined dimensions than those from non-innovative systems. Of the fifteen dimensions examined, it was found that superintendents from innovative systems differed significantly on seven from those in non-innovative systems.

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Michigan Department of Education

Lansing, Michigan

NOTE

This research project was also reported in a dissertation submitted to Michigan State University.

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CHAPTER I

INTRODUCTION TO THE STUDY

Introduction

Before 1960 the information known about educational change could best be summarized by the following two generalizations: First, school systems which are the first to adopt new educational practices spend the most money per pupil and those which adopt new practices last spend the least. Secondly, the characteristics and behaviors of school administrators are unimportant in explaining the adoption rates for new curriculum practices within school systems.

The results of a number of research studies conducted since 1960 have challenged the validity of these generalizations. Most of these studies have found insignificant correlations between the expenditures per pupil in school systems and the adoption of new curriculum practices. This suggests that there is no consistent monetary explanation for the rate of educational change within school systems. These studies also show the important role school administrators play in changing the curriculum. However, the writer found few studies which isolated specific behavioral differences between administrators from innovative and non-innovative school systems. This finding indicated a need for research to determine how school administrators from innovative and non-innovative systems differed on selected behavioral dimensions.

Statement of the Problem

This study was designed to collect empirical and descriptive evidence to determine how school administrators from innovative and non-innovative systems differed on seven selected administrative behavioral dimensions. The specific dimensions for which data was collected included the school administrators': experiences, preparation, organizational involvement, professional reading, information sources used, involvement of teaching staff in curriculum change, and recognition of teaching staff's worth and dignity.

Importance of the Study

The present time is characterized as an era of change. Today there are rapid changes, far reaching in scope and significance, which impose a variety of stresses and strains upon established institutions. Education is feeling the impact of these change forces as much as other institutions. In fact education is bombarded with pressures for change by both internal and external forces. Currently all forms of mass media and popular and professional journals support the premise that educational change is necessary and depict the need for an increased rate of its occurence. The present study is of particular importance in that it provides much needed data concerning the impact of selected administrative behavioral dimensions upon curriculum change processes in local school systems.

The two major variables in the present study, innovativeness and administrative behaviors, are very important in current research being conducted in many disciplines. While the writer was reviewing the literature summarized in Chapter II, he found that much effort has and is currently being expended to explain the diffusion of innovations in many disciplines. Rogers lists over 600 sources where innovation is a major variable in a recent bibliography.[1] During the initial phases of this study Rogers in a number of personal interviews also pointed to many oncoming studies in the area of innovation research.

The importance of this study is further emphasized by recent findings which indicate that the school administrator and his administrative style of operation are important variables in determining the rate of educational change. These findings show that selected administrative behaviors are related to the innovativeness or non-innovativeness of school systems. This study provides much needed evidence from a sample of school administrators concerning the association between seven selected administrative behavioral dimensions and school system innovativeness. The evidence is of particular importance because many vague generalizations have been made in the literature concerning the behavior of school administrators on these dimensions without providing research support from the field of education.

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[1] Everett M. Rogers, Bibliography of Research on the Diffusion of Innovations (Michigan State University, College of Communication Arts, 1964).

Support for studying the relationship between school administrative behaviors and school system innovativeness also is implicit in the writing of Rogers. At a recent seminar on "Change Processes in the Public Schools" held at the University of Oregon he stated that "an understanding of the behavior of innovators (educational) is essential to a comprehension of the central processes of social change (educational change, in this instance)."[2]

In summation this study provides much needed data concerning: the relationship between specific school administrative behaviors and school systems innovativeness; the differences in the curriculum change processes between innovative and non-innovative school systems; and administrative behavioral dimensions which school boards and administrators can depend upon with some degree of reliability when selecting administrative personnel who may inject new changes into existing curriculums.

Assumptions upon Which the Study Is Based

The basic assumptions upon which this study is based include:

1. The composite cost factor including size, effort, ability, and expenditure per pupil does not have a direct relationship with the innovativeness of the local school systems as determined by the constructed innovative scale.

2. The actions and behaviors of school administrators

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[2] Everett M. Rogers, "What Are Innovators Like?" in Change Processes in the Public Schools, by Richard O. Carlson and Others (Eugene, Oregon: University of Oregon Press, 1965), p. 55.

have a significant influence on the introduction of new curriculum practices into school systems.

3. Selected administrative behaviors are associated with the number of new educational practices introduced into local school systems.

4. Selected administrative behaviors associated with the introduction of new educational practices can be identified.

5. School administrators from innovative school systems differ from school administrators in non-innovative school systems on selected administrative behavioral dimensions.

Scope and Limitations of the Study

In this study many possible variables were available for investigation. This section specifies the validity, variables, data, sample, and the extent to which the results can be generalized.

1. The validity of the variables is directly related to the survey instrument and non-structured interview schedule used to identify selected administrative behaviors. The quality of the data derived from the survey instrument and interviews is directly related to the skill, knowledge, and technique of the investigator in phrasing the questions precisely. The pilot administrations of the survey instrument and interview schedule along with constant revision of both, should hold response error to a minimum.

2. The assistance provided by the Michigan Department of Public Instruction in collecting the data could effect

the validity of the school administrator's responses on both the survey instrument and non-structured interviews. This would be particularly true if they should perceive this study as a form of State Education Department evaluation of their leadership in curriculum development. The letter of instruction accompanying each survey instrument assured the administrators in the sample of the anonymity of their responses. Furthermore, the superintendents involved in the non-structured interviews were assured at the beginning of the anonymity of their responses.

3. The analysis performed upon the data in this study is limited to testing the significance of different frequencies of school administrators categorized on the basis of a number of selected administrative behavioral dimensions and the degree of innovativeness of their school systems. The statistical analysis is performed on the total group of administrators and upon selected sub-groups categorized according to their current employment position.

4. In this study the administrator population is limited to all school superintendents and full time principals who have served in this capacity for the previous three years in the twenty school systems involved in this study. The twenty school systems were not selected randomly, and no attempt will be made to generalize the results of this investigation beyond the population of this study.

5. In this study four selected cost factors including school district: enrollment, operational millage

allocation, state equalized evaluation, and expenditure per pupil are all combined as a single composite cost factor. This composite cost factor is not intended to be inclusive.

6. The results of this study should be interpreted as an indication of an association between the various administrative behavioral dimensions and the school systems' innovativeness, but not as a direct causal relationship between these variables.

Definition of Terms

This section defines the terms used to form the operational hypotheses and those which are used in only a limited and specific sense in this study.

"Administrators": All superintendents of schools, secondary principals, and elementary principals in K-12 class four Michigan Public School Systems who have served at least three years in their current positions.

"Class Four School Districts": All Michigan Public School Systems with a minimum of 1700 pupil membership and organized under the procedures as specified by the Michigan School Code for "districts of the fourth class."[3]

"Constructed Innovative Scale": The summation of the total number of innovations within a school district as reported by the 1963 Survey of Five Years of Progress in Public Schools divided by the number of schools in each district.

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[3] State of Michigan, General School Laws, Speaker-Hines and Thomas, Inc. (Lansing, Michigan, 1960), pp. 22-24.

"Innovative School Systems": All class four K-12 school systems which scored 35 or above on the constructed innovative scale.

"Non-Innovative School Systems": All class four K-12 school systems which scored 10 or below on the constructed innovative scale.

"Professional Education Dimension": The total number of semester hours completed beyond the Bachelor of Arts or Science Degree.

"Organizational Involvement Dimension": The total number of membership and leadership positions held in both community and professional organizations during the last four years.

"Sources of Information Dimension": All media including personal contacts, reading, conference attendance, etc. utilized by administrators for information concerning new curriculum practices.

"Professional Experience Dimension": The total number of years spent in education as either a teacher or administrator.

"Selected Administrative Behavioral Dimensions": The dimensions describing the administrator's educational preparation, experience, sources of information, organizational involvement, professional reading, staff utilization, and recognition of the teaching staff's worth and dignity.

"Staff Involvement Dimension": The degree to which the superintendent involves actively his teaching staff members in the awareness, investigation, and decision-making phases of the curriculum improvement process.

"Recognition of Teaching Staffs' Worth and Dignity Dimension": The degree that the superintendents recognize and value their teaching staffs on the fifteen categories illustrated in Exhibit 1 of the Appendix.

"School Systems": All legally organized class four K-12 public school systems as specified by the General School Laws with a minimum pupil enrollment of 1700.

Hypotheses

The hypotheses presented in this section appear in general research form. In Chapter III these hypotheses are operationalized and presented in testable form.

H_1 Administrators in innovative school systems will earn a greater number of semester hours beyond the bachelor's degree than administrators in non-innovative school systems.

H_2 Administrators in innovative school systems will indicate more organizational involvement than administrators in non-innovative school systems.

H_3 Administrators in innovative school systems will use a greater number of information sources than administrators in non-innovative systems.

H_4 Administrators in innovative school systems will have more years of experience as educators than administrators in non-innovative school systems.

H_5 Administrators in innovative school systems will read more professional journals than administrators in non-innovative school systems.

H_6 Superintendents in innovative school systems will use wider teaching staff involvement when instituting new curriculum practices than superintendents in non-innovative school systems.

H_7 Superintendents in innovative school systems will recognize the worth and dignity of teaching staff members more when instituting new curriculum practices than superintendents in non-innovative school systems.

Overview

Chapter I develops the frame of reference for the entire study. Included are the introduction, problem statement, importance of study, scope and limitations of the study, definition of terms, general hypotheses to be examined, and the basic assumptions underlying the study.

A review of the related literature is presented in Chapter II. This includes the theoretical basis of the variables and pertinent conclusions from related research investigating the relationship of innovativeness and the behavior of innovators in education and other disciplines.

In Chapter III the research procedures and methodology employed are presented. This chapter centers upon the source of the data, development and implementation of the survey instrument, development of the interview schedule, selection of school systems for investigation, the research design, and the statistical treatment of the data.

The examination and analysis of the data is presented in Chapter IV. This chapter is divided into three parts including: (1) an analysis of the data presented by the survey instrument, (2) an analysis of the data presented by the non-structured interviews, and (3) an interpretation of its relationships found from the statistical analysis of the data.

Chapter V presents a summary of the study, conclusions, and recommendations for further research.

CHAPTER II

REVIEW OF RELATED RESEARCH

Introduction

Two generalizations emerged while reviewing the literature related to the problem under study. First, there has been a vast amount of research in the area of both educational and general innovation research. Secondly, there has been a limited amount of research related to the specific problem under investigation in the present study.

Criteria for Selection of Related Research

Given the nature of the previous research, it was evident that criteria should be established to determine which past research was appropriate for inclusion in this section. The following criteria were established to provide the guidelines for the decisions made:

1. The vast amount of previous research related to the topic under study and the dynamic nature of our industrial society led to the decision to focus upon research conducted after 1945.

2. The appropriateness of the previous research in light of the present design was of utmost importance in decision making. Many of the studies cited in the literature have related isolated variable associated with the economic

base of the school district including enrollment, per pupil expenditure, operational millage allocation, etc., to the innovativeness of the school system. Studies of this type are mentioned only as needed to develop the present research design.

3. Because of the rich body of diffusion and innovation literature available outside of education, studies which dealt with isolating the behaviors and characteristics of innovators from other areas are also cited when appropriate to the administrative behavioral dimensions being investigated.

4. The studies cited in this chapter are distinguished by their focus upon behaviors and characteristics which appear associated with innovators in education specifically.

The literature viewed as appropriate for the current study will be summarized in this manner: the first section will focus on previous studies essential to the present research design; the second section will deal with studies which identify specific behaviors and characteristics of individuals viewed as innovators.

Review of Closely Related Studies

Little research has been devoted to the relationship of specific school administrative behaviors and the districts' adoption of new curriculum practices. Considerable research, however, has centered on the innovators' attitudes and values, educational background, group involvement, social status, size of operation, and information sources used. A frequently used method for collecting the data in studies relating innovator behaviors to the innovation of social systems has been the structured interview schedule.

Studies Essential to the Research Design

The majority of the past educational innovation research bears the mark of one man, Paul Mort, and his students at the Institute of Administrative Research at Columbia University. As mentioned in the problem statement, studies conducted in the Mort tradition are based upon the assumption that the administrative behaviors of school administrators are unimportant in explaining the adoption of educational change within local school systems. Carlson commenting on over 100 studies done in the Mort tradition between 1945-55 indicates that the basic assumption in these studies is that the local school administrators are trapped by their school budget. This would indicate that school systems which adopt new educational practices first, spend more money per pupil than those who adopt later. Mort and his associates have reported high positive correlations (r= .60 to .71) between per pupil expenditure and the adoption of new curriculum practices.[1] If the amount spent per pupil is so highly related to the degree of educational innovation in the local systems then the assumptions underlying the present study would be meaningless.

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[1] David H. Ross, Administration for Adaptability (New York: Metropolitan School Study Council, 1958), p. 15.

However, more recent research findings by Carlson and Childs indicate that the relationship between per pupil expenditure, teacher salary, operational millage levied, and the adoption of new educational practices are non-significant. Carlson[2] in a 1961 study in a western Pennsylvania county found a negative correlation (-.02) between such school demographic factors as per pupil expenditure, teacher salary, millage allocation, etc., and the rate of adoption of new educational practices. These general findings were replicated in a state wide study by Carlson in West Virginia where again it was found that "....the rate of adoption of new educational practices was not significantly related to expenditure per child."[3] Childs[4] used the data from the 1963 Survey of Five Years of Progress in Michigan Elementary and Secondary Schools to construct innovative scores for each Michigan K-12 Public School District and found non-significant correlations (r=.12 to .22) between the constructed innovative scores and these demographic factors: total pupil membership, state equalized evaluation, millage allocated for operation, and expenditure per pupil.

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[2] Richard Carlson, "School Superintendents and Adoption of Modern Math-- a Social Structure Problem." Innovation in Education, ed. Matthew B. Moles (Bureau of Publication, Teachers College, Columbia University, 1964), p. 340.

[3] Richard Carlson and others, Change Processes in Public Schools (Eugene, Oregon: University of Oregon Press, 1965), p. 8.

[4] Childs, "A Study of the Belief Systems of Administrators and Teachers in Innovative and Non-Innovative School Districts" (unpublished Ph.D. dissertation, Michigan State University, East Lansing, Michigan 1965), p. 60.

These findings indicate that administrators are more than victims of their budgets and support the assumptions underlying the research design of this study. Carlson stated, "To my way of thinking, these rather recent findings which indicate no significant relationship between rate of adoption of educational innovations and expenditure per child, are indeed happy ones."[5]

Rogers' research indicates how the behaviors and characteristics of educational innovators and non-innovators differ in such areas as: age, social status, education, income, information sources used, organizational involvement, and opinion leadership. However, his generalizations concerning the behaviors and characteristics of educational innovators and non-innovators are based almost exclusively upon research findings from areas outside of education. A major purpose of the present study is to collect the empirical and descriptive data needed to evaluate a number of Rogers' generalizations concerning differences in the behaviors of school administrators from highly innovative Michigan public school districts and those from non-innovative school districts.

The use of school administrators instead of teachers in this study is based upon previous research which indicates that school administrators are the central elements in deciding whether a new educational practice should be adopted. As early as 1938 Mort and Cornell in their study of nine curriculum adoptions in 48 Pennsylvania school systems found that "....the role of the administrator was significant in the introduction of the nine adoptions studied in Pennsylvania."[6] Dementer[7] in an unpublished doctoral thesis found that building principals are the key figures in the educational change process. Ross in one of the most complete compendiums of educational change literature, summarized over one-hundred fifty studies dealing with the adoption of new educational practices. He concluded that "the local school administrator, by virtue of his position and legal setting in which he finds himself in most states, is the most important link in the adoption process."[8] Furthermore, he indicated that it is of little wonder that the studies of Mort, Skogsberg, Collins, Ebey, and Berthold (See Bibliography) have found the local school administrator to be the most significant individual in the innovation process in school systems.

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[5] Carlson and others, Change Process in Public Schools, p. 8.

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[6] Paul R. Mort and Francis G. Cornell, American Schools in Transition (New York: Bureau of Publications, Teachers College, Columbia University, 1941), p. 201.

[7] Lee H. Dementer, "Accelerating the Local Use of Improved Educational Practices in School Systems" (doctoral dissertation, Teachers College, Columbia University, 1951), p. 23.

[8] Donald H. Ross, Administration for Adaptability revised ed. (New York: Metropolitan School Study Council, 1958), p. 407.

More recently, Brickell in his state wide study of educational change in New York State focused upon the importance of the school administrator in changing the curriculum when he stated, "New types of instructional programs are introduced by administrators. Contrary to general opinion, teachers are not change agents for instructional innovation of major scope."[9] Mackenzie after analyzing over thirty case studies of recent curriculum changes in the elementary and secondary schools of New York City concluded that "in the descriptions analyzed principals were found to be very influential in changing the determiners."[10] He also indicated that "in many instances, the superintendents of schools appeared to be the most powerful single participant in change."[11]

The literature reviewed thus far is essential for establishing the assumptions, hypotheses, and general research design of the present study. The research reported to this point indicates that the behaviors and actions of school administrators are directly associated with the degree of innovativeness of their school systems. The basic question then is which administrative behavioral dimensions are clearly associated with the innovativeness of local school systems?

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[9] Henry M. Brickell, Organizing New York State for Educational Change (Albany, New York: University of the State of New York, State Education Department, 1962), p. 22.

[10] Gordon N. Mackenzie, "Curriculum Change-Participants, Power, and Process," Innovation in Education, Ed. Matthew B. Moles (Bureau of Publications, Teachers College, Columbia University, 1964), p. 411.

[11] Ibid., p. 411.

Administrative Behaviors Related to Innovativeness

A review of the literature indicated that very little study has been devoted to the relationship of specific administrative behaviors and school systems innovation. Skogsberg in an unpublished Ed. D. project based on an intensive study of six highly adaptive Metropolitan School Study Council Systems (M.S.S.C.) found that their administrative staff had a high level of professional training. He concluded, "However, there is an almost fallow field for those who might wish to study empirically the measurable personal and professional characteristics of administrators predictive of the adaptability records of their schools or systems."[12]

Carlson conducted two studies, one in a western Pennsylvania county and one on a state wide basis in West Virginia, based on the assumption that the position a superintendent holds in the social structure of school superintendents directly related to his school systems' adoption of such new education practices as: team teaching, modern mathematics, foreign language in elementary schools, programmed instruction, ungraded primary, and advance placement classes. Social structure position for the superintendents in these studies was determined by: social network involvement based upon interaction with other superintendents;

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[12] Alfred H. Skogsberg, Administration for Adaptability, edited by Donald H. Ross (New York: Metropolitan School Study Council, Teachers College, Columbia University, 1958), p. 415.

status referring to each superintendent's ranked position along the continuums of education, professionalism, and prestige. Results from both studies indicated that those high on measures of social network involvement and position in the status structure tend to adopt the new practices mentioned above earlier than those scoring lower on these social structure variables. In addition, school administrators from innovative systems tended to differ from those in non-innovative systems when compared on the educational dimension.[13]

This conclusion is confirmed by research findings in other areas of innovation and diffusion literature. Rogers using data obtained from a state wide random sample of 104 farm operators and a state wide sample of 99 innovators points out that the characteristics of innovators indicate that they have more education.[14] Adopters of New Farm Ideas, a compendium of the research studies describing the behaviors and characteristics of farm innovators between 1955 and 1961, emphasized that "research findings generally indicate that farmers who are among the first to adopt new practices have the most formal education."[15] In addition, Havens reviewed twenty-five studies from the general area of innovation and diffusion literature between 1952-61 which analyzed the relationship between formal education and innovation in various areas including education. He found that twenty-four of the twenty-five studies reviewed resulted in a significant positive relationship between these two factors.[16]

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[13] Richard Carlson, Innovations in Education, p. 339.

[14] Everett M. Rogers, Characteristics of Agricultural Innovators and Other Adapter Categories (Wooster, Ohio, Ohio Agricultural Experiment Station Bulletin 882, May 1961), p. 1.

Rogers has monopolized the articles describing the specific behaviors of educational innovators. In each he has indicated that educational innovators have more formal education but qualified this generalization as follows: "I have drawn primarily on research.... in such diverse fields as rural sociology, industrial engineering, and anthropology."[17]

The generalizations of Rogers describing the behaviors of educational innovators are not necessarily inadequate even though based on research in different fields. However, neither is it known that they are accurate and adequate for describing educational innovators. They are and should be treated as empirical research questions.

Gallagher in an unpublished Ed. D. project using data obtained from fifty communities in the New York

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[15] Adopters of New Farm Ideas, Characteristics and Communication Behavior (North Central Regional Extension Publication No. 13, Ames, Iowa, October, 1961), p. 6.

[16] A. Eugene Havens, A Review of Factors Related To Innovativeness (Ohio Agricultural Experiment Station Mimeo Bulletin 329, Columbus, Ohio, February, 1962), pp. 7-9.

[17] Carlson and others, Change Processes in the Public Schools, p. 57.

Metropolitan area found that symbiotic groups (community organizations) have a greater impact on the adaptability of the school system to new educational practices when they have members drawn from the school administration or teaching staff. His research indicated that the correlation between school system adaptability and school staff membership in community organization was a significant ($r=+.454$).[18]

Gallagher concluded that staff involvement in community organizations is important in determining the school systems' adoption of new educational practices. The research of rural sociologists with farmers indicates that those categorized as innovators are more active in farm and community organizations at the local, county, and state level.[19] These findings have indicated that administrators from innovative and non-innovative school systems appear to differ on the organizational involvement dimension.

Mason in the Public Opinion Quarterly reported that individuals in organizations who are high in relative influence appear to use information from a variety of sources, not just mass media when introducing new practices. Research studies with farm innovators indicates that they not only receive more different types of information about new practices but also receive it sooner and from more technically accurate sources. Havens[20] reviewed eighteen studies relating farm innovation with sources of information used. His work indicated that seventeen of the eighteen studies showed positive significant results at (Alpha=.01) level.

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[18] Ralph P. Gallagher, "Some Relationships of Symbolic Groups to Adaptability in Public Schools and Together Related Factors" (New York: unpublished Ed. D. project, Teachers College, Columbia University, 1949), p. 24.

[19] Adopters of New Farm Ideas, p. 6.

Rogers commenting on the sources of information used by educational innovators indicated they use more "impersonal and cosmopolite sources of information."[21] He has indicated that at the time innovators decide to implement a new idea few members of their social system have experience with it. Thus, innovators must secure new ideas and information concerning these practices through impersonal sources such as mass media and research reports. These studies have indicated that school administrators from innovative systems seem to depend on different sources of information than those in non-innovative systems.

McClellan using data from 41 Metropolitan School Study Council systems investigated some aspects of the structural patterns of school systems which were related to adaptability. Of particular relevance for the present study was his investigation of the relationship between security of superintendents' position and the adaptability of their school systems to new educational practices. The results indicated that the relationship between McClellan's Index of Growth measuring the adaptability of the local district and length of chief administrator service was a non-significant negative correlation of -.295.[22] The school administration literature indicates that time is needed for a chief school administrator to show his worth as an educational leader. McClellan is of the opinion that the desirable length of the superintendent's term of office is still undetermined with little empirical evidence to support any contention.[23]

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[20] Havens, A Review of Factors Related to Innovativeness, pp. 13-14.

[21] Rogers, Theory into Practice, p. 254.

Of particular importance for the present study are some of Griffiths' propositions concerning factors leading to change and inhibiting change in an organization such as a school system. Griffiths pointed out that change in an organization such as a school system is more probable if the chief administrator is from outside the system than from inside. He cited a study by Carlson (1961) which found that school systems which appointed their superintendents from within the system tend to continue the same educational program, while those systems appointing superintendents from outside the system tend to be more innovative.[24] Griffiths contended that a characteristic of all social systems which inhibits change is the length of chief administrator's tenure He stated that "the number of innovations is inversely proportional to the tenure of the chief administrator."[25] Although no objective evidence is given, Griffiths used the underlying assumptions of his systems-theory model to account for this including: (1) All processes which bring a steady state to an organization are given time to operate. (2) Feedback channels have become established. (3) Progressive segregation develops as the sub-systems become more independent and change becomes difficult because the frequency of interactions between sub-systems decreases. In other words, as a system operates, sub-systems develop interaction patterns designed to minimize conflict. Each says in effect, if you don't rock the boat, I won't.

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[22] George B. McClellan, Administration for Adaptability, edited by Donald H. Ross (New York, Metropolitan School Study Council, Teachers College, Columbia University, 1958), p. 425.

[23] Ibid., p. 425.

[24] Daniel E. Griffiths, "Administrative Theory and Change in Organization," Innovations in Education, edited by Matthew B. Miles (New York: Teachers College, Columbia University, 1964), p. 433.

Havens summarized three studies with farmers which showed that farm innovators do not differ significantly from non-innovative farmers on the dimension of years of farming experience.[26] Rogers indicated that there are sound theoretical grounds for expecting educational innovators to have less experience than non-innovators. He concluded that "since the young are less likely to be conditioned by traditional practices within the established culture, there are theoretical grounds for expecting them to be more innovative."[27] Past research indicates that the professional experiences of administrators from innovative systems appear to differ from the experiences of those in non-innovative systems.

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[25] Ibid., p. 434.

[26] Havens, A Review of Factors Related to Innovativeness, p. 21.

Research on the reading habits of farm innovators indicates they read significantly more extension bulletins and farm magazines than non-innovators. Havens summarized four studies conducted by rural sociologists which investigated the reading habits of farm innovators and non-innovators. Three of the four studies indicated that the reading habits of these two groups differed significantly.[28] The review of the literature indicated that no attempt has been made in the field of education to relate the reading behavior of school administrators to the innovativeness or adaptability of the school districts in which they function.

Robert H. Guest in Organizational Change pointed out that students of organizations generally agree that controls and changes imposed from the top of a hierarchy down, do not assure the co-operation of subordinates. He states, "There must be some kind of involvement from below which makes it possible for subordinates to accept and even initiate a certain amount of change themselves."[29] In addition, Culbertson suggested that the current role of administrators in the change process is that of serving other educational personnel. Thus the administrator's role appears to be that of helping others change rather than making changes himself.

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[27] Rogers, Theory into Practice, p. 253.

[28] Havens, A Review of Factors Related to Innovativeness, p. 20.

[29] Robert H. Guest, Organizational Change: the Effects of Successful Leadership (Homewood, Illinois, Dorsey Press, Inc., 1962), p. 153.

In one of the first studies investigating educational change Mort and Cornell[30] indicated that the only way administrators can improve the adaptability of their schools, without assuming direct initiation, is by providing sufficient flexibility making it easier for the teaching staff to carry through changes before enthusiasm dies.

Buley in an unpublished Ph. D. thesis using data collected from the teaching staffs of fifty Metropolitan School Study Council systems found that teachers in the most adaptable school systems believed many of the new practices they introduced were really the conscious product of their own originality. Furthermore, "many administrators will be surprised to learn that the most adaptable staffs do not believe their ideas for changes have come from either the administration or educational and teacher training institutions."[31] Buley concluded that "adaptable school staffs become so because they are not limited to the intellectual boundaries of one individual, the administrator, but rather have the strength and richness of all to accomplish that which comes from the freedom of all to think and invent."[32]

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[30] Mort, American Schools in Transition, p. 390.

[31] Hilton C. Buley, Administration for Adaptability, edited by Donald H. Ross (New York, Metropolitan School Study Council, Teachers College, Columbia University, 1958), p. 442.

Lovos in an unpublished Ph. D. thesis compared the data from the 1946 and 1954 applications of the "Growing Edge" (Survey of New Educational Practices Adopted) in the Metropolitan School Study Council systems. It was found that administrators in adaptable schools delegate responsibility and authority freely. Lovos indicated that these administrators induced the feeling among their staffs that personal prestige of the staff comes from the accomplishments of the whole group. In addition, he found that administrators in highly adaptable schools were willing to learn from their staffs and depended upon teaching staff discussion as leading to the best solutions of problems. These studies have indicated that administrators in innovative systems may differ from those in non-innovative systems in the amount and form of staff involvement used during the curriculum process.

Why do some school systems adopt many new curriculum practices and others only a few when selected cost factors supposedly related to the quality of the educational program are held constant as the studies of Carlson and Childs indicate? William Husk[33] in an unpublished dissertation at Michigan State University contended that changes in the instructional program must be preceded by changes in the people involved. He cited a number of sources which show that far reaching changes in values, feelings, and behaviors of people occur in situations where their worth and dignity is recognized. In _Perceiving Behaving Becoming_, the 1962 Yearbook of Association for Supervision and Curriculum Development, the authors indicated that involving those to be effected by a change actively and in a significant manner is a strong indication that their worth and dignity is recognized and valued. One of the basic propositions investigated in this study is that school administrators in innovative systems involve more of their teaching staff actively when instituting new educational practices than those in non-innovative systems. In addition, it is also expected that administrators from innovative systems interact with their teaching staffs in a manner which recognizes their worth and dignity while those in non-innovative systems place less emphasis on the worth and dignity of their teaching staff members when instituting new educational practices.

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[32] Ibid., p. 443

[33] William Husk, An Exploratory Study of Possible Relationships Between the Educational and Professional Backgrounds of School Superintendents and Their Views of Instructional Improvement (unpublished Ed. D. dissertation, Michigan State University, 1964), pp. 8-33.

The dimensions identified in the operational definition for worth and dignity, illustrated in Exhibit 1 of the Appendix, were based on the following research studies. Skogsberg using data collected from six highly adaptive Metropolitan School Study Council systems in communities ranging from 10,000 to 30,000 found that superintendents in districts which seemed to be going places had certain characteristics in common. He found that "in these people there is an awareness of the existence of the always better way to do things, of the advantages of team accomplishment, of the fact that ideas can come from every person involved in the undertaking."[34] His research showed that these superintendents view their total educational staff as a functioning team along with lay people of the community. They delegated responsibility and authority freely to those who could or would try to do the job. They also appeared willing to learn from their teaching staffs and utilize the process of democratic discussion as the best solution to problems. This commitment to the democratic process has implications for the way the teaching staff is treated. Skogsberg concluded, "The peculiar abilities of staff members are freely recognized and every opportunity is utilized for each to have his place in the sun."[35]

Huber,[36] studying the factors involved in the spread of High School Language Laboratories in seventy school systems throughout the United States, found that the majority of initiations were by teachers who needed the support from some administrator before adoption occurred. Similarly, Brickell in his state wide study of change in

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[34] Skogsberg, Administration for Adaptability, p. 415.

[35] Ibid., p. 415

[36] Ralph Norman Huber, "The Spread of an Innovation: High School Language Laboratories" (unpublished paper, New Haven, Connecticut, Yale University, 1961), p. 116.

New York State found that the key to successful innovation is the assistance of the administrators during the trial stage.

Likert observed that "changes which are made rapidly or which are superimposed by authority meet with strong resistance."[37] He added that errors are likely to be made in introducing major changes and that changes end abruptly if those at higher levels in the school system hierarchy do not support subordinates who make mistakes. One indication that administrators recognize and value the worth and dignity of their teaching staffs is the support provided them when mistakes are made during the implementation of new educational practices.

Chesler, Schmuck, and Lippitt in a pilot study involving the entire teaching staffs of nine elementary and secondary schools in the Detroit area found that these factors influenced innovative teaching: (1) teachers' feelings that new practices can help solve problems important to them and their pupils, (2) teachers' feelings that a given practice is easily adaptable to their own style of teaching with little extra investment of time and energy, and (3) teachers' feelings that the school administration will support new teaching practices. The last finding is of importance for the present study in that school administrators can directly stimulate innovativeness by both suggesting and openly supporting new ideas suggested by their teaching staffs. The results of this research indicated a highly significant (rho=+.65) relationship between the amount of staff innovativeness as measured by the mean number of new practices introduced by each teacher and the staff's perception of the principal's support for innovation. An even higher relationship (rho=+.73) was found between the teacher's perceptions of his principal's support and his perception of his colleagues' support for innovation. These investigators concluded that "the principal's attitude influences staff norms, and both his orientation and peer standards combine to influence actual staff innovativeness."[38] Along with this, principals with innovative staffs were found to be in tune with teachers' feelings and values about education and better involved in their informal relationships. It was also found that administrators with the least innovative staffs related more formally to their teachers and failed to consider their values and emotions. These findings have indicated that it is not enough that a school administrator be interested in staff innovativeness; his interest must also be obvious to the teaching staff. Chesler and associates concluded that "the principal who publicly supports new classroom practices is more likely to have innovative teachers than ones who do not."[39]

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[37] Rensis Likert, New Patterns of Management (New York: McGraw-Hill Book Company, Inc., 1961), p. 246.

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[38] Mark Chesler, Richard Schmuck, and Ronald Lippitt, "The Principal's Role in Facilitating Innovation," Theory into Practice (College of Education, Ohio State University, Vol. II, No. 5, December 1963), p. 274

Pelley using data collected from the Metropolitan School Study Council systems found that administrative actions that resulted in various types of social recognition encouraged invention on the part of the teaching staff. His study indicated that teachers who are inventive need the encouragement and protection which comes only through membership in a sympathetic group. He emphasizes that it is the role of administrators to provide the opportunities for cooperation, collaboration and social approval which contribute to the secure environment necessary for trying new curriculum practices. Pelley emphasized the strategic position of school administrators in stimulating innovation when he stated, "There can be no substitute for favoring friendly administration which provides the dynamic leadership, good human relations, adequate instructional supplies, and freedom for initiative to flourish."[40] The previous research studies of Skogsberg, Huber, Chesler, and Pelley served as the basis for this study of how administrators from innovative systems differ from those in non-innovative systems in recognizing the worth and dignity of their teaching staffs.

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[39] Ibid., p. 275.

[40] James H. Pelley, Adaptability for Administration, edited by Donald H. Ross (New York: Metropolitan School Study Council, Teachers College, Columbia University, 1958), p. 39.

Summary

The basis upon which this study was designed and conducted emerged from the review of the previous research in innovation. Only studies having a direct bearing on the research design of this study are included in this chapter. The review of the literature indicated that selected administrative behavioral dimensions appear to differentiate school administrators from innovative and non-innovative school systems.

CHAPTER III

RESEARCH PROCEDURES

Introduction

Much preliminary work preceded the actual statistical testing of the hypotheses. The school system sample was identified; the administrative sample within the selected districts was isolated; instrumentation was developed, field tested, and restructured; the interview schedule formulated, field tested, and refined; and categories for analyzing the interview data were developed. This chapter describes in detail how the preceding steps were implemented in this investigation.

Identification of Sample

The sample used in this study was drawn from the population consisting of all 433 class four K-12 Michigan Public School Districts in 1964. Class four K-12 districts were selected because: (1) they are of such size that the administrators are known throughout the system. (2) they are distributed in a random fashion over the entire State of Michigan. (3) data in the form of selected cost factors and constructed innovative scores was available for the entire sample.

The constructed innovative scores formulated by Childs using the information reported to the Michigan Department of Public Instruction in the Survey of Five Years of Progress in Public Education in Michigan (illustrated in Exhibit 2 of the Appendix) was used to determine the degree of innovativeness for each class four K-12 system in the state. This information consisted of "check and no-check" responses indicating the presence or absence of seventeen curriculum practices at the elementary and secondary levels in each school district in Michigan. Since many of the practices listed in the survey instrument were mutually exclusive while others were dissimilar, Childs developed a weighing system to insure that each practice was given equal consideration. He gave equal weight for each year that a practice was adopted during the five year interval covered by the survey. The number of new practices for each school system was then totaled and the school districts ranked on the basis of total number of practices adopted in the district. To eliminate the possibility that some districts might appear innovative only because they had a large number of individual schools, Childs divided the total number of innovations per district by the number of individual school units in each district. This resulted in an average innovative score for each district and they were then rank ordered on the basis of their average constructed innovative scores. The scores ranged from 0 to 56 for all 604 K-12 Michigan School Districts. The range for all 433 class four

K-12 districts was from 0 to 44. The school systems used in this study were selected from this rank ordered list. Previous research indicated that the distribution of data used to determine districts as innovative or non-innovative was skewed toward non-innovativeness. Childs concluded that the initial classification of schools as innovative and non-innovative on the basis of his constructed innovative scores was valid. He stated that "the data on the adoption of various educational practices indicated that the schools classified as innovative and non-innovative were different."[1]

The manner in which particular school systems were selected for the study was related to previous research findings in the area of educational innovation. Until the findings of Carlson (1961-65) all past research had indicated a strong relationship between the number of new educational practices instituted in a school district and the size and expenditure factors of the school system. Childs in selecting the sample for his unpublished study used the official statistics from the Michigan Department of Public Instruction for the 1962-63 school year concerning these educational cost factors: state equalized evaluation per student, student enrollment, current expenditure per student, and millage allocation for operation. To evaluate the past findings of educational research Childs computed Person Product Moment

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[1] Childs, "A Study of the Belief Systems of Administrators and Teachers in Innovative and Non-Innovative School Districts" (unpublished Ph. D. dissertation, Michigan State University, East Lansing, Michigan, 1965), p. 66.

Correlations for all school districts in Michigan between the above four cost factors and their constructed innovative scores. These correlations are summarized in Exhibit 3 of the Appendix and, in general, show slight positive relationships but none of any statistical significance. After evaluating this data Childs concluded that for the purposes of his study, the minimum number of school districts needed to control the cost factor variables is eight.[2] However, in the present study twenty school systems are included to insure: (1) an adequate number of school administrators for purposes of a statistical analysis of the results, (2) to insure an adequate geographic distribution of the sample throughout Michigan.

The actual selection of school systems for inclusion in the study was done in the following manner. From the upper 4% of the rank ordered listing of class four K-12 school systems on the constructed innovative scale, ten innovative systems were selected on the basis of a composite cost factor combining: pupil membership, per pupil expenditure, evaluation per child, and total operational millage allocated. Five of these innovative systems were selected on the basis of having a high composite cost factor and five with a low composite cost factor. Similarly, the ten non-innovative systems were selected from the lower ten per cent of the rank ordered listing on the constructed innovative scale. Every attempt was made to match the total composite cost factors of the non-innovative systems with that of the innovative systems. Exhibit 4 of the Appendix illustrates a comparison of the twenty sample systems on the basis of cost factor expenditure. The final ten innovative systems selected for this study are among the upper one per cent of all Michigan K-12 school systems on the constructed innovative scale and the upper three per cent of the innovative class four K-12 systems.

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[2] Ibid., p. 35.

The twenty school districts selected were invited to participate in the study by a letter from the Michigan Superintendent of Public Instruction, illustrated in Exhibit 5 of the Appendix. All twenty superintendents responded within two weeks agreeing to take part in the study and supplying a list of full time principals who had served in this capacity for the past three years. One school system was dropped from the sample at this time when it became clear that both the superintendent and his principals had not served for three years in their present positions. The school systems involved in this study are indicated by geographic location on the map illustrated in Exhibit 6 in the Appendix.

The administrative sample consisted of all full time school superintendents, secondary principals, and elementary principals who have served in these capacities for the past three years in their present districts. It was decided to use only administrators who had three years of experience in their present positions for several reasons:

(1) These individuals were present when the "Survey of Five Years of Progress in Public Education in Michigan" was conducted. (2) These individuals would be familiar with the change processes used to introduce new curriculum practices in their present districts. (3) These individuals were involved significantly in the curriculum changes described in the Five Year Study of Progress in Michigan Schools and could describe and discuss them with some degree of accuracy. There were fifty-five innovative school administrators in the sample and sixty-one non-innovative administrators. Exhibit 7 in the Appendix illustrates the breakdown of the sample used in this study.

Development of Survey Instrument

Each school administrator in the sample was administered the survey instrument illustrated in Exhibit 8 of the Appendix. This instrument was developed for the purpose of providing the data necessary to analyze the first five hypotheses. The survey instrument was formulated by first isolating the general areas of information needed to test the hypotheses. Next, the specific sub-items were developed under each area. The basic criterion relied upon when forming the sub-items was whether they could be answered concisely and whether they contributed valid data to the analysis. After a rough draft of the survey instrument had been developed, it was administered as a pilot study to three Western Michigan University staff members who previously had been school administrators. This initial trial run resulted in many modifications of the survey's sub-items and a clarification of the directions. The survey instrument was then administered to three practicing school administrators who weren't involved in the actual study, to determine the clarity of directions, conciseness of items and responses, and evaluation of whether the survey could be completed in five minutes or less. The results of this trial run indicated that many of the survey items posed a potential threat to the practicing administrators. To reduce the potential threat in some of the items it was decided that the responses of the administrators should be kept anonymous. This field test also verified the adequacy of the directions, items, and length of the instrument.

After the survey instrument had been finalized, the superintendent of each district in the sample was notified by the letter illustrated in Exhibit 9 of the Appendix as to when the instruments would arrive at their office and the procedures for administering them to their administrative staff. Two weeks later the survey instruments, return envelopes, and a letter of instructions similar to that in Exhibit 10 of the Appendix were sent to each superintendent for distribution to his administrative staff. The survey instrument return was 109 out of 116 or ninety-four per cent. Specifically, 51 out of 55 innovative administrators responded, while 58 out of 61 non-innovative administrators responded. Due to the high return rate no follow-up letters were sent to the school systems in the sample.

The reliability of the data gathered by the survey instrument was checked using an adaption of the test-retest method. The survey instruments sent two superintendents were coded for easy identification upon return. These superintendents then were asked orally the survey instrument items during their non-structured interviews. The comparison of each subject's survey instrument responses with those on the interview indicated nearly ninety-five per cent agreement.

Development of Interview Schedule

All twenty superintendents in the sample were interviewed using appropriate items from a non-structured interview schedule similar to that in Exhibit 11 of the Appendix. Only superintendents were interviewed because previous research indicated the importance of their role in changing the curriculum of local districts. The information provided by the non-structured interviews was used to analyze the differences in staff involvement and treatment of staff members by superintendents from innovative and non-innovative systems.

In developing the non-structured interview schedule the broad areas to be covered were first isolated from an examination of the hypotheses to be tested. The information desired included: (1) the kind and degree of staff involvement used in the curriculum change process and (2) the extent administrators showed by their actions that they valued the worth and dignity of their teaching staffs.

Since a non-structured interview procedure was used the formal outline schedule illustrated in Exhibit 11 of the Appendix served only as a guide to give direction and continuity to the interviews and not as a restrictive list of questions to follow. Direct questions aimed at eliciting this information were avoided because of the ease with which administrators could give stereotyped textbook responses rather than the information describing their actual behavior. Evidence to substantiate this is provided by: (1) the threatening nature of the questions involved which would lead many administrators to give responses showing them in a favorable light. (2) conversations with curriculum personnel from Michigan State University, Michigan Department of Public Instruction, and Western Michigan University who felt that many administrators are "game players" in that their verbal responses to specific questions oftentimes are different than their actual behavior in the field. (3) the desire for all individuals to present themselves in the most favorable manner.

For the above reasons it was decided that the non-structured, indirect, less threatening interview approach would yield more accurate data. The general approach used during the interviews involved having the superintendents reconstruct as accurately as possible the entire curriculum change process from initial awareness to evaluation after implementation with concrete illustrations. The change processes described varied from system to system with modern mathematics being used in all interviews. As the superintendents were reconstructing the change process related to specific curriculum changes, a number of questions were introduced at critical points to measure the "general behavior" of the administrator in regard to teaching staff involvement during the change process. A pilot interview was conducted with a school superintendent not included in the study as soon as the rough form of the interview schedule had been determined. After the trial interview the superintendent was asked to react to the methodology employed and to suggest improvements in the questioning technique used. The tape of this trial interview was studied in depth to refine the questioning technique further. This process was repeated with two more superintendents to confirm the adequacy of the interview schedule.

Format of Interview Schedule

The arrangement of the general areas in the interview sequence required much consideration. The three pilot interviews proved helpful in determining the order of the major areas of the interview. Since none of the superintendents in the sample were personal acquaintances of the investigator, it was initially necessary to establish rapport and assure the interviewees of the anonymity of their responses. The practice interviews also indicated that information describing the framework of the school districts' organizational structure related to curriculum change should be identified early since it was involved in all the curriculum change processes described later. This technique also contributed greatly toward building up initial rapport. The pilot interviews indicated that once the formal change structure in a school system had been identified, the superintendent was ready to describe how specific curriculum changes were introduced. In addition, the trial runs indicated that it was more effective to permit the superintendent to describe in detail, without interruptions, the process used to implement change before asking him to generalize on specific aspects of change in his district.

The Interviews

All interviews were arranged in advance by telephone. Each interview was recorded on tape and later transcribed for purposes of analysis. Six weeks were required to complete the twenty interviews with all but one being held in the offices of the superintendents of the districts in the sample. One interview was conducted by long distance telephone at the request of the superintendent. The interviews ranged in length from forty-five minutes to two hours with the average interview being one hour and fifteen minutes in length.

Statistical Hypotheses

The following hypotheses were formulated for testing purposes in accordance with the previously stated operational definitions:

H_{0_1} There is no difference between the proportion of administrators earning semester hours beyond the bachelor's degree in innovative systems and the proportion of administrators earning semester hours beyond the bachelor's degree in non-innovative systems.

H_{0_2} There is no difference between the proportion of administrators indicating high organizational involvement in innovative systems and the proportion of administrators indicating high organizational involvement in non-innovative systems.

H_{0_3} There is no difference between the proportion of administrators indicating the use of many information sources for curriculum change in innovation systems and the proportion of administrators indicating the use of many information sources in non-innovative systems.

H_{0_4} There is no difference between the proportion of administrators having many years of experience as educators in innovative systems and the proportion of administrators having many years of experience as educators in non-innovative systems.

H_{0_5} There is no difference between the proportion of administrators indicating the reading of many professional journals in innovative systems and the proportion of administrators indicating the reading of many professional journals in non-innovative systems.

H_{O_6} There is no difference between the proportion of superintendents using wide staff involvement in changing the curriculum in innovative school systems and the proportion of superintendents using wide staff involvement in changing the curriculum in non-innovative systems.

H_{O_7} There is no difference between the proportion of superintendents showing by their actions that they value the worth and dignity of their teaching staff members in innovative systems and the proportion of superintendents showing by their actions that they value the worth and dignity of their teaching staff members in non-innovative systems.

H_1 The proportion of administrators earning semester hours beyond the bachelor's degree in innovative school systems is greater than the proportion of administrators earning semester hours beyond the bachelor's degree in non-innovative school systems.

H_2 The proportion of administrators indicating high organizational involvement in innovative systems is greater than the proportion of administrators indicating high organizational involvement in non-innovative systems.

H_3 The proportion of administrators indicating the use of information sources for curriculum changes in innovative systems is greater than the proportion of administrators indicating the use of many information sources for curriculum changes in non-innovative systems.

H_4 The proportion of administrators having many years of experience as educators in innovative systems is greater than the proportion of administrators having many years of experience as educators in non-innovative systems.

H_5 The proportion of administrators indicating the reading of many professional journals in innovative systems is greater than the proportion of administrators indicating the reading of many professional journals in non-innovative systems.

H_6 The proportion of superintendents using wide staff involvement in changing the curriculum in innovative systems is greater than the proportion of superintendents using wide staff involvement in changing the curriculum in non-innovative systems.

H_7 The proportion of superintendents showing by their actions that they recognize the worth and dignity of their teaching staff members in innovative systems is greater than the proportion of superintendents showing by their actions that they recognize the worth and dignity of their teaching staff members in non-innovative systems.

Procedures for Analysis of the Data

The null hypotheses were tested with the chi-square analysis and the Fisher Exact Probability Test using appropriate methods extracted from Siegel,[3] Dixon and Massey,[4] and Hayes.[5]

The data resulting from the survey instruments was analyzed as follows: (1) using the total sample of administrators to seek differences in administrative behaviors between those in innovative and non-innovative systems, (2) using the upper and lower thirds of the administrative sample to seek differences in administrative behaviors between the extremes, and (3) using the major sub-groups of superintendents and secondary and elementary principals to seek differences between administrative behaviors from those in innovative and non-innovative systems. The type of test employed in each instance was guided by these considerations from Siegel:[6]

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[3] Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York: McGraw-Hill Book Company, Inc., 1956).

[4] Wilfred V. Dixon and Frank V. Massey, Introduction to Statistical Analysis (New York: McGraw-Hill Book Company, Inc., 1951).

[5] William L. Hayes, Statistics for Psychologists (New York: Rinehart and Winston, 1963).

[6] Siegel, Nonparametric Statistics for the Behavioral Sciences, p. 110.

1. When the sample is greater than 30 use the chi-square analysis corrected form to insure continuity.

2. When the sample is 30 or less use the Fisher Exact Probability Test.

After the taped interviews had been transcribed, they were reviewed to isolate the responses of the superintendents as either a high, non-determinent or a low indication of the behaviors outlined below (see Exhibit 12 for a complete statement):

I. The degree and type of teaching staff involvement used at the awareness, investigation, and decision-making phases of the curriculum change process.

II. The degree that the superintendents:

A. recognize the value of praising their teaching staffs for contributions to curriculum development.

B. recognize the teaching staff's ability to contribute to local curriculum development.

C. recognize the teaching staff's sincerity to improve the curriculum.

D. recognize the value of giving prime consideration to the teaching staff's desires in curriculum decision-making.

E. recognize the value of diversity in their teaching staff's professional behavior.

F. recognize the value of utilizing members of their teaching staff in leadership positions during curriculum change.

G. 1. recognize the value of supporting teaching staff members prior to curriculum change.

2. recognize the value of supporting teaching staff members during curriculum change.

H. recognize the value of encouraging interested teaching staff members with opportunities to experiment.

I. recognize the value of providing their teaching staffs with released time to improve the curriculum.

J. recognize the necessity of justifying the rejection of their teaching staff's recommendations for curriculum change.

K. recognize their teaching staff's commitment and readiness as crucial factors when making curriculum decisions.

L. recognize the value of encouraging their teaching staffs not to fear failure when trying new curriculum practices.

M. recognize the value of creating a climate where the teaching staff's desires are placed before financial considerations in curriculum decision-making.

N. recognize the value of facilitating teaching staff involvement in curriculum change rather than dominating it.

O. recognize the value of teaching staff members committed to the development of each child to his potential over those committed to achieving subject matter standards alone.

The reliability of the categorization system used in classifying the non-structured interview data was determined by using the Fisher Exact Probability Test. That is, one of the twenty interview transcripts was selected at random and analyzed by both a college professor with a similar educational background to the investigator and a public school administrator. Both individuals used the categorization method employed in this study and illustrated in Exhibit 12 of the Appendix. The results of their classification were compared with those of the investigator to see if they differed significantly. No significant difference was found in the categorization of the interview data by the three individuals.

Summary

This chapter describes the design, methodology, and those procedures used to develop this study from its inception through the data analysis phase. The sample used in this study was not random but selected from pre-existing data collected by the Michigan Department of Public Instruction and the constructed innovative scale developed by Childs. The data used in the analysis was collected with a specially designed survey instrument and with a non-structured interview technique. The data was analyzed by use of the chi-square analysis and the Fisher Exact Probability Test.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

This chapter analyzes the data collected by the survey instruments and non-structured interviews concerning the differences between school administrators from innovative and non-innovative systems on selected administrative behavioral dimensions. This chapter is divided into three sections. The first section analyzes the data collected by the survey instrument with a format paralleling the statement of the first five hypotheses in Chapter I. The second section analyzes the data from the non-structured interviews. The third section interprets the relationship found in the first two sections in terms of: (1) the present research design, (2) the past research findings, and (3) the behavior of educational innovators on selected dimensions.

Analysis of Data from Survey Instrument

The data analysis provides a basis for describing how the behavior of innovative school administrators differs from that of non-innovative administrators. Besides, it provides evidence to evaluate the previously predicted behavior of innovative school administrators based on generalizations from other disciplines such as rural sociology, business and medicine.

Statistical Procedures

The chi-square analysis and Fisher Exact Probability Test were used to analyze the data in this section. The data was presented in percentage form to evaluate whether it follows the prediction in the research hypothesis when significant values were obtained with these tests. In addition, all significant values of the chi-square and Fisher Test are further analyzed by the contingency coefficient to determine the amount of relationship between the variables.

HYPOTHESES TESTING

Formal Education

The first hypothesis predicted that a greater proportion of administrators from innovative systems have earned more semester hours beyond their bachelor's degree than those from non-innovative systems.

H_{0_1} There is no difference between the proportion of administrators earning semester hours beyond the bachelor's degree in innovative systems and the proportion of administrators earning semester hours beyond the bachelor's degree in non-innovative systems.

H_1 The proportion of administrators earning semester hours beyond the bachelor's degree in innovative school systems is greater than the proportion of administrators earning semester hours beyond the bachelor's degree in non-innovative systems.

The data collected by the survey instrument indicated that the one hundred nine school administrators in the sample had earned semester hours beyond the bachelor's degree ranging from zero to ninety. For all administrators in the sample the mean number of hours earned beyond the bachelor's degree was 39.97. Using the mean score of 39.97 as the basis for categorization, the frequency of administrators earning more or fewer semester hours than the mean beyond the bachelor's degree was determined. Table 1 shows the tabulation of these frequencies.

TABLE 1.--Distribution of administrators earning more or or fewer semester hours beyond the bachelor's degree than the mean of the total sample

Semester Hours Completed	Innovative Administrators	Non-Innovative Administrators
More than Mean of 39.97	23	30
Less than Mean of 39.97 Hours	28	28

The first null hypothesis was tested using the chi-square technique following the procedures set forth by Dixon and Massey.[1] The resulting chi-square value of .476 was not equal to or greater than the 3.84 value needed to reject the null hypothesis at alpha .05 level of significance. Thus, the null hypothesis was not rejected.

When comparing the upper and lower one-thirds of all

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[1] Wilfred J. Dixon and Frank J. Massey, Introduction to Statistical Analysis (McGraw-Hill Book Company, Inc., New York, 1951), pp. 188-189.

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When comparing the upper and lower one-thirds of all administrators in the sample on the dimension of semester hours earned beyond the bachelor's degree, the frequency distribution tabulated in Table 2 resulted.

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[1] Wilfred J. Dixon and Frank J. Massey, Introduction to Statistical Analysis (McGraw-Hill Book Company, Inc., New York, 1951), pp. 188-189.

TABLE 2.--Distribution of extreme thirds of administrators on the dimension of semester hours earned beyond the bachelor's degree

Semester Hours beyond bachelor's	Innovative Administrators	Non-Innovative Administrators
Upper One Third	18	18
Lower One Third	17	19

By testing the previously stated null hypothesis with the chi-square analysis a value of .055 was obtained. At the .05 level of significance this chi-square value was not equal to or greater than the 3.84 needed. Thus, the null hypothesis was not rejected.

Organization Involvement

The second hypothesis predicted that a higher proportion of administrators from innovative school systems indicate more organizational involvement than those in non-innovative school systems.

H_{0_2} There is no difference between the proportion of administrators indicating high organizational involvement in innovative systems and the proportion of administrators indicating high organizational involvement in non-innovative systems.

H_2 The proportion of administrators indicating high organizational involvement in innovative systems is greater than the proportion of administrators indicating high organizational involvement in non-innovative systems.

The data collected with the survey instrument showed that total membership and leadership positions held during the four years ranged from two to twenty-seven for all administrators in the sample. Summing for each administrator in the sample the total number of professional and community organization membership and leadership positions held during the last four years, one finds a mean of 9.16. The sample of administrators was categorized into a two by two table on the basis of above and below the mean number of organizational involvements. The frequencies in Table 3 indicate this tabulation.

TABLE 3.--Distribution of administrators on the basis of above and below the mean number of organizational involvements

Organizational Involvement	Innovative Administrators	Non-Innovative Administrators
Above Mean Involvement	28	22
Below Mean Involvement	23	36

The null hypothesis was tested using the chi-square analysis and a value of 3.14 obtained. In order to reject the null hypothesis at the alpha=.05 level of significance with one degree of freedom a value of 3.84 is needed. Since the obtained chi-square value was not equal or greater than that specified, the null hypothesis was not rejected.

The frequency distribution shown in Table 4 resulted when the upper and lower thirds of school administrators were compared on the dimension or organizational involvement.

TABLE 4.--Distribution of the upper and lower thirds of administrators on the organizational involvement dimension.

Organizational Involvement	Innovative Administrators	Non-Innovative Administrators
Upper One Third of Organizational Involvement	20	16
Lower One Third of Organizational Involvement	14	22

The null hypothesis was tested with the chi-square analysis to determine whether it could be rejected. A chi-square value of 2.19 was obtained. This value wasn't large enough to reject the null hypothesis at the alpha=.05 level of significance.

Information Sources Used

The third hypothesis predicted that a higher proportion of school administrators from innovative systems will indicate the use of a greater number of information sources for curriculum change than those in non-innovative systems.

H_{O_3} There is no difference between the proportion of administrators indicating the use of many information sources for curriculum change in innovative systems and the proportion of administrators indicating the use of many information sources in non-innovative systems.

H_3 The proportion of administrators indicating the use of many information sources for curriculum change in innovative systems is greater than the proportion of administrators indicating the use of many information sources for curriculum change in non-innovative systems.

The data collected with the survey instrument indicated that administrative use of the information sources investigated, ranged from zero to all ten sources. The mean number of sources depended upon by all one-hundred nine administrators in the sample was 5.3 sources. This value was obtained by summing for each administrator in the sample the number of items out of ten indicated as extremely and often useful. On the basis of the mean number of sources depended upon, the number of administrators from innovative and non-innovative systems above and below the mean were tabulated. Table 5 shows this tabulation.

TABLE 5.--Distribution of administrators on the basis of above and below the mean number of information sources used

Sources of Information	Innovative Administrators	Non-Innovative Administrators
Above Mean Number Used	31	21
Below Mean Number Used	20	37

The null hypothesis was tested using the chi-square analysis and a value of 6.57 obtained. At the specified level of significance, alpha=.05, a chi-square equal to or greater than 3.84 is needed to reject the null hypothesis. The null hypothesis was rejected since the obtained chi-square value was greater than that needed.

The above data expressed in terms of per cent of the entire sample is presented in Table 6.

TABLE 6.--Per cent of administrators categorized as using more or fewer than the mean number of information sources

Administrator Category	Per Cent Using More than Mean Number of Sources	Per Cent Using Fewer than Mean Number of Sources
Innovative Administrators	28.4%	19.2%
Non-Innovative Administrators	18.3%	33.9%

This table indicates that the discrepancy from the expected frequencies stated in the research hypothesis was in the predicted direction. This indicates that there are a higher proportion of administrators who used many sources of information for curriculum change in innovative school systems than in non-innovative school systems.

The contingency coefficient is an often used non-parametric measure of the correlation between two sets of variables. When the contingency coefficient is computed for the data in Table 5 using the procedures specified by Siegel,[2] a positive coefficient of .238 is obtained. Siegel reports that the largest contingency coefficient for a two by two table such as Table 5 is .707. Thus, the results obtained above indicate that there is more than a slight degree of association between the number of information sources used by administrators and the innovativeness of their school systems.

The data collected with the survey instrument was further analyzed using the chi-square technique to find differences in the use of each separate information source by the administrators in the sample. The response to each information source illustrated in Exhibit 8, item 19, of the Appendix classified as useful if marked extremely or often useful and not useful if marked seldom or not useful. The administrators from innovative and non-innovative systems were then classified into two by two chi-square tables and the appropriate chi-square values found. Table 7 indicates the obtained chi-square values and the number of administrators in each analysis.

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[2] Siegel, Nonparametric Statistics for the Behavioral Sciences, pp. 196-202.

TABLE 7.--Obtained chi-square values between usefulness of each information source and the administrators from innovative and non-innovative school systems

Sources of Information	Obtained Chi-Square Values between Usefulness of Each Source and Innovation	Number of Administrators in Chi-Square Analysis
Graduate Courses in Education	.555	63
Professional Journals	2.160	79
Mass Media	.439	63
Suggestions from Teachers	1.105	90
Suggestions from Fellow Administrators	3.105	88
Visits to Other School Systems	1.055	76
Contacts with Administrators from Other Systems	.106	85
Educational Materials Representatives	.203	59
State Department of Public Instruction	.851	76
Federal Government	1.295	69

None of the obtained chi-square values for each separate information source was significant.

Professional Experiences

The fourth hypothesis predicted that a higher proportion of administrators in innovative school systems would have more years experience as educators than those in non-innovative systems.

H_{04} There is no difference between the proportion of administrators having many years of experience as educators in innovative systems and the proportion of administrators having many years of experience as educators in non-innovative school systems.

H_4 The proportion of administrators having many years of experience as educators in innovative systems is greater than the proportion of administrators having many years experience as educators in non-innovative systems.

The data from the survey instrument for all one-hundred nine administrators in the sample showed a range of experience in the field of education from three to forty-three years. The mean number of years spent as educators was 22.8 for those in the sample. Classifying all administrators in the sample on the basis of either above or below the mean number of years spent as educators, resulted in the frequency tabulation illustrated in Table 8.

TABLE 8.--Distribution of administrators on the basis of years spent as educators

Years Spent as Educators	Innovative Administrators	Non-Innovative Administrators
Above Mean Years as Educators	27	21
Below Mean Years as Educators	24	37

The null hypothesis was tested using the chi-square analysis and a value of 3.086 obtained. The obtained chi-square value was not equal to or greater than the 3.84 needed to reject the null hypothesis at the alpha=.05 level of significance.

Even though the chi-square value obtained from the data in Table 8 was insignificant, it fell in the direction predicted by the research hypothesis. To evaluate the data more adequately it was decided to compare the upper and lower thirds of the administrator sample to investigate if they differed in the direction predicted by the fourth hypothesis. The frequency distribution in Table 9 on the follow-page indicates the tabulation of this data.

TABLE 9.--Distribution of upper and lower thirds of administrators on the basis of years spent as educators

Years Spent as Educators	Innovative Administrators	Non-Innovative Administrators
Upper Third in Terms of Service	20	16
Lower Third in Terms of Service	9	27

Using the extreme thirds from the total sample of administrators the null hypothesis was analyzed with the chi-square test and a value of 6.986 obtained. At the alpha=.05 level of significance a chi-square value of 3.84 is needed to reject the null hypothesis. Thus, the null hypothesis was rejected at the specified alpha level.

The data arranged in Table 9 indicates that the discrepancy from the expected frequencies is in the predicted direction. When this data is expressed as per cents there is a greater per cent of administrators with many years spent as educators in innovative rather than in non-innovative school systems. These percentages are illustrated in Table 10.

TABLE 10.--Percentages of administrators categorized on the basis of years spent as educators

Administrator Categories	Per Cent with Many Years of Experience	Per Cent with Few Years of Experience
Innovative Administrators	27.8%	12.5%
Non-Innovative Administrators	22.2%	37.5%

To analyze further the difference between the proportion of administrators from innovative and non-innovative systems on the years spent as educators dimension, a series of chi-squares were run using the following data: (1) number of years spent as a classroom teacher, (2) years spent as an administrator, and (3) years spent in present position. The data in the above areas was analyzed using the total sample of one-hundred nine administrators categorized as being above or below the mean and with respect to the upper and lower thirds of administrators from the total sample. Table 11 summarizes the obtained chi-square values.

TABLE 11.--Summary of chi-square values between administrators and years spent in specific positions as educators

Educational Experience Dimensions	Administrators Categorized on the Basis of the Mean	Upper and Lower Thirds of Administrators
Years Spent in Classroom Teaching	1.711	.891
Years Spent in Administration	3.769	6.854*
Years Spent in Present Position	1.711	3.657

*Chi-square values which are significant at alpha=.05 level (3.84).

The obtained chi-square values comparing the upper and lower thirds of all administrators on the dimension of years spent in administration was significant at the alpha=.05 level. The data from this comparison expressed as percentages indicates that a greater proportion of administrators with many years of administrative experience are found in innovative rather than non-innovative school systems. The percentages expressed in Table 12 are based upon the seventy-two administrators in the upper and lower thirds of the sample.

TABLE 12.--Percentage of administrators from upper and lower thirds of the sample categorized on the basis of years spent in administration dimension

Administrator Categories	Many Years of Administration Experience	Few Years of Administration Experience
Innovative Administrators	29.2%	13.9%
Non-Innovative Administrators	20.8%	36.1%

Professional Reading

The fifth hypothesis predicted that a greater proportion of administrators from innovative systems indicate the reading of more professional journals than do those in non-innovative systems.

H_{O_5} There is no difference between the proportion of administrators indicating the reading of many professional journals in innovative systems and the proportion of administrators indicating the reading of many professional journals in non-innovative systems.

H_5 The proportion of administrators indicating the reading of many professional journals in innovative systems is greater than the proportion of administrators indicating the reading of many professional journals in non-innovative systems.

The data collected by the survey instrument for the total sample indicated a range of regular professional reading from zero to ten or more journals. The mean number of indicated professional journals read regularly by the total sample was 3.17 journals. Table 13 tabulates the number of administrators who read more than or fewer than the mean number of professional journals.

TABLE 13.--Distribution of administrators who read more than or fewer than the mean number of professional journals

Number of Professional Journals Read	Innovative Administrators	Non-Innovative Administrators
Above Mean Number of Journals Read	21	15
Below Mean Number of Journals Read	30	43

The null hypothesis was tested with the chi-square analysis and a value of 2.877 obtained. Since the obtained value was not equal to or greater than that needed at the specific level of significance, alpha=.05, it was not rejected.

Furthermore, when the upper and lower thirds of administrators are compared on the dimension of professional reading the frequency tabulation presented in Table 14 resulted.

TABLE 14.--Distribution of administrators from upper and lower thirds of the sample on their indicated professional reading behavior

Professional Journals Read	Innovative Administrators	Non-Innovative Administrators
Upper Third in Professional Journals Read	21	15
Lower Third in Professional Journals Read	17	10

The null hypothesis was examined using the chi-square technique and a value of .891 obtained. The obtained value is not equal to or greater than that specified at alpha=.05 level of significance and the null hypothesis was not rejected.

Analysis of Data from Non-Structured Interviews

Staff Involvement in Curriculum Change

The sixth hypothesis predicted that a greater proportion of school superintendents from innovative systems use wider staff involvement in changing the curriculum than those from non-innovative systems.

H_{06} There is no difference between the proportion of superintendents from innovative systems using wide staff involvement when changing the curriculum and the proportion of superintendents from non-innovative systems using wide staff involvement when changing the curriculum.

H_6 The proportion of superintendents using wide staff involvement when changing the curriculum in innovative systems is greater than the proportion of superintendents using wide staff involvement when changing the curriculum in non-innovative systems.

The data collected by the non-structured interviews from the twenty school superintendents was analyzed to determine whether teaching staff involvement was high or low during the awareness, investigation, and decision-making phases of the curriculum change process identified by Rogers.[3] If the superintendent's interview statements concerning teaching staff involvement during curriculum change are highly inconsistent, they were classified as non-determinant. All the non-determinant instances were dropped during the statistical analysis and only the high and low instances were summed for the superintendents from the innovative and non-innovative systems. Table 15 indicates the frequency tabulation for the superintendents from innovative and non-innovative systems on the basis of high and low teaching staff involvement during the awareness, investigation, and decision-making phases of the curriculum change process.

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[3] Everett M. Rogers, "Innovation and Education," (a paper presented at the Conference of Michigan Cooperative Curriculum Program, Boyne Mountain, Michigan, September 24, 1965), p. 2.

TABLE 15.--Distribution of superintendents on the basis of high and low teaching staff involvement during three phases of the curriculum change process

Superintendent Categories	High Teaching Staff Involvement	Low Teaching Staff Involvement
Innovative Superintendents	21	8
Non-Innovative Superintendents	10	18

The null hypothesis was tested using the chi-square analysis and a value of 6.22 obtained. The obtained value was greater than the 3.84 needed at the alpha=.05 to reject the null hypothesis. Thus, the null hypothesis of no difference in teaching staff involvement during the three phases of the curriculum change process is rejected.

When the data expressed in Table 15 is expressed in percentages, it verifies that the discrepancy from the expected frequency stated in the research hypothesis is in the predicted direction. That is, a greater proportion of superintendents who use wide teaching staff involvement in curriculum change are found in innovative rather than non-innovative systems.

Table 16 presents these percentages.

TABLE 16.-- Percentage of superintendents using high and low teaching staff involvement during the curriculum change process

Superintendent Categories	Per Cent Using High Staff Involvement	Per Cent Using Low Staff Involvement
Innovative Superintendents	36.8%	14.1%
Non-Innovative Superintendents	17.5%	31.6%

The responses of the superintendents were analyzed separately using the Fisher Exact Probability Test at the awareness, investigation, and decision-making phases of the curriculum change process to find if the superintendents from innovative and non-innovative systems differed in the involvement of their teaching staff at each of these stages. The superintendents in the sample were categorized into two by two tables on the basis of high and low instances of teaching staff involvement at each of the three stages of the curriculum change process. The Fisher values were obtained and evaluated for significance using the procedures specified by Siegel.[4] Table 17 indicates the obtained significance levels for the awareness, investigation, and decision-making phases of the curriculum change process.

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[4] Siegel, Nonparametric Statistics for the Behavioral Sciences, pp. 97-104.

TABLE 17.--The significance levels for the Fisher Exact Probability Test comparing innovative and non-innovative superintendents on teaching staff involvement during three stages of the curriculum change process

Phases of Curriculum Change Process	Significance Levels of Fisher Exact Probability Test	Number of Superintendents in Fisher Analysis
Awareness	.05 Level	19
Investigation	Non-Significant	19
Decision-making	.05 Level	19

This analysis indicated that superintendents from innovative systems differed from those in non-innovative systems in their teaching staff involvement at the awareness and decision-making phases of the curriculum change process. When data used in the Fisher Analysis is expressed in percentages, it indicates that a greater percentage of superintendents from innovative systems involve their teaching staffs in the awareness and decision-making phases of the change process than those from non-innovative systems. This is illustrated in Table 18.

TABLE 18.--Percentage of superintendents classified as high and low during the awareness and decision-making phases of the change process

Superintendent Categories	Awareness High Involvement	Phases Low Involvement	Decision-Making High Involvement	Phases Low Involvement
Innovative	42.1%	10.5%	21.1%	26.4%
Non-Innovative	10.5%	36.9%	0%	52.5%

Recognition of Staff Members' Worth and Dignity

The seventh hypothesis predicted that a greater proportion of superintendents from innovative systems recognize the worth and dignity of their teaching staff members when changing the curriculum than those in non-innovative systems.

H_{0_7} There is no difference between the proportion of superintendents showing by their actions that they value the worth and dignity of their teaching staff members in innovative systems and the proportion of superintendents showing by their actions that they value the worth and dignity of their teaching staff members in non-innovative systems.

H_7 The proportion of superintendents showing by their actions that they value the worth and dignity of their teaching staff members in innovative systems is greater than the proportion of superintendents showing by their actions that they value the worth and dignity of their staff members in non-innovative systems.

Using the data collected with the non-structured interviews the responses of each superintendent in the sample were analyzed on the fifteen predetermined criteria specified in Chapter III. The interview transcript of each superintendent was evaluated as to whether it indicated high or low behavior on each dimension. When the transcript indicated inconsistencies in the superintendents behavior the dimension was categorized as non-determinant and not considered in the final analysis. Summing the total highs and total lows on the fifteen dimensions for the superintendents from innovative and non-innovative systems the frequency distribution illustrated in Table 19 resulted.

TABLE 19.--Distribution of superintendents' responses of high and low behavior instances on fifteen predetermined dimensions

Superintendent Categories	Sum of Highs on Dimensions	Sum of Lows on Dimensions
Innovative	109	27
Non-Innovative	49	79

Analyzing the data with the chi-square test a value of 46.36 was obtained. Since the obtained chi-square value was greater than the 3.84 needed at the alpha=.05 level, the null hypothesis was rejected. When the data from this comparison is expressed in percentages, it indicates that the prediction in the research hypothesis is in the correct direction. That is, a greater percentage of superintendents from innovative systems are categorized as high on the fifteen predetermined dimensions than those from non-innovative systems. Table 20 indicates these percentages.

TABLE 20.-- Percentage of superintendents categorized as high and low on fifteen predetermined dimensions

Superintendent Categories	Per Cent of Highs	Per Cent of Lows
Innovative	41.3%	10.2%
Non-Innovative	18.6%	29.9%

The responses of the superintendents were also analyzed separately with the Fisher Exact Probability Test for each of the fifteen predetermined dimensions to indicate differences between the superintendents from innovative and non-innovative systems. The superintendents were categorized into two by two table on the basis of the total highs and total lows on each of the fifteen dimensions. The Fisher Test was then applied to the tabulation for each dimension with the results summarized in Table 21.

TABLE 21.--Significance level of comparison between superintendents from innovative and non-innovative systems on each of fifteen dimensions indicating their recognition of the worth and dignity of teaching staff members

Pre-Determined Dimension	Significance Level of Fisher Test	Number of Superintendents in Comparison
1. Administrators recognize the value of praising teaching staff for contributions to curriculum improvement.	Non-Significant	18
2. Administrators recognize teaching staffs' ability to contribute to local curriculum improvement.	.01 Level	16
3. Administrators recognize teaching staffs' sincerity to improve the curriculum.	.025 Level	15
4. Administrators recognize the value of giving prime consideration to the teaching staffs' desires on curriculum questions.	Non-Significant	15
5. Administrators recognize the value of diversity in teaching methods.	Non-Significant	17
6. Administrators recognize the value of utilizing the teaching staff in leadership positions in curriculum change.	.05 Level	17
7.a. Administrators recognize the value of providing support to teaching staff prior to instituting curriculum practices.	Non-Significant	19

Pre-Determined Dimensions		Significance Level of Fisher Test	Number of Superintendents in Comparison
7.b.	Administrators recognize the value of providing support to teaching staff during the institution of a curriculum practice.	Non-Significant	16
8.	Administrators recognize the value of providing teaching staff members with the opportunity to experiment with new curriculum practices.	Non-Significant	18
9.	Administrators recognize the value of providing teaching staff members with released time for curriculum change.	Non-Significant	15
10.	Administrators recognize the necessity for justifying the rejection of teaching staffs' recommendations for curriculum improvement.	Non-Significant	14
11.	Administrators recognize the teaching staffs' commitment and readiness as a crucial factor when making curriculum decisions.	Non-Significant	16
12.	Administrators recognize the value of encouraging their teaching staffs not to fear mistakes when trying new curriculum practices.	.05 Level	17

Pre-Determined Dimensions	Significance Level of Fisher Test	Number of Superintendents in Comparison
13. Administrators recognize the value of creating a climate for change where the teaching staffs' desires are placed before finances in curriculum decision-making.	.025 Level	19
14. Administrators recognize their role as facilitating teaching staff involvement in curriculum change rather than dominating it.	.025 Level	18
15. Administrators recognize the value of a teaching staff committed to individual student progress rather than achievement of arbitrary subject matter standards.	.025 Level	16

The significance levels found with the Fisher Exact Probability Test indicate that superintendents from innovative systems differ from those in non-innovative systems on seven of the fifteen dimensions. The data used in the Fisher Analysis is presented in percentage form in Table 22. These percentages indicate that the per cent of superintendents from innovative systems classified as high on the seven significantly different dimensions are in the predicted direction.

TABLE 22.--Percentage of superintendents classified as high and low on the seven significant dimensions in Table 21.

Dimensions	Categorization	Superintendent Categories	
		Innovative	Non Innovative
2. Recognition of teaching staffs' ability to contribute to curriculum improvement.	High	56.2%	6.2%
	Low	6.2%	31.4%
3. Recognition of teaching staffs' sincerity to improve the curriculum.	High	53.3%	6.6%
	Low	6.6%	33.5%
6. Recognition of teaching staffs' leadership ability in curriculum improvement.	High	35.3%	11.8%
	Low	11.8%	41.1%
12. Recognition of need to encourage teaching staff not to fear mistakes when instituting new practices.	High	41.1%	11.8%
	Low	11.8%	35.3%
13. Recognition of teaching staffs' desires over finances in curriculum decision-making.	High	47.4%	15.8%
	Low	5.2%	31.6%

Dimensions	Categorization	Superintendent Categories	
		Innovative	Non Innovative
14. Recognition of administrators' role as facilitating change rather than dominating it.	High	38.9%	5.6%
	Low	11.1%	44.4%
15. Recognition of the value of a teaching staff interested in student progress rather than arbitrary subject matter standards.	High	50.0%	17.7%
	Low	0%	32.3%

Exploration of Relationships

This section of the chapter will explore the results of the data analysis in the same order as the null hypotheses were examined. The purpose of this section will be to: (1) isolate those relationships that best differentiate between administrators from innovative and non-innovative school systems, (2) relate the present findings to those described in the literature, and (3) indicate those areas in the present study which seem most appropriate for future research into the behavior of innovative educational administrators.

Interpretation of Survey Instrument Data

The research hypothesis predicting that a greater proportion of administrators from innovative systems have earned more semester hours beyond the bachelor's degree than those from non-innovative systems was rejected by the data collected. The data indicated that the proportion of administrators earning semester hours above the mean of the sample was no different for those from innovative or non-innovative systems. Furthermore, when the upper and lower thirds of the administrators were compared, it was obvious that those in the upper third in terms of semester hours earned beyond the bachelor's degree appeared to be equally distributed between innovative and non-innovative school systems.

This finding may be viewed from several perspectives. First, the sample size was relatively small. Although all the administrators in the twenty systems selected did form an adequate sample, the restrictions of: (1) at least three years service in their present positions and (2) that they be a full time principal or superintendent did limit the sample of administrators to one hundred sixteen of which one hundred nine responded. Secondly, an examination of the number of semester hours earned beyond the bachelor's degree for both innovative and non-innovative administrators was quite similar. The same was true when the sub-groups of superintendents, secondary principals, and elementary principals from the innovative and non-innovative systems were compared. Table 23 summarizes the mean number of semester hours earned for each of the above groups.

TABLE 23.--Mean number of semester hours earned by administrators from innovative and non-innovative systems on the basis of total and sub-group comparison

Administrator Categories	Innovative Means	Non-Innovative Means
Total Administrator Sample	40.6 (N = 51)	39.5 (N = 58)
Superintendents	55.6 (N = 9)	52.5 (N = 10)
Secondary Principals	44.4 (N = 14)	42.6 (N = 21)
Elementary Principals	33.6 (N = 28)	31.0 (N = 27)

The similarity between the hours earned beyond the bachelor's degree for the total and sub-groups from the innovative and non-innovative systems can be explained by the requirements of most school districts which require that administrators have at least a master's degree or equivalent therof. The data in this study does not support the generalizations found in the educational change literature that innovative administrators have more formal education than those categorized as non-innovative. This can be attributed to the fact that these generalizations are based upon the research findings in other disciplines such as rural sociology, business, anthropology, etc. where generally educational attainment separates innovative and non-innovative groups. In educational administration more formal education, usually a master's degree or its equivalent, is prerequisite for employment. Thus, the differences in formal education between administrators from innovative and non-innovative systems is not significantly different.

Since the results fail to reject the first null hypothesis of no difference in the formal education of administrators from innovative and non-innovative systems, no statement is made about the association between the innovativeness of school systems and the formal education of the administrators. Additional research is needed to determine if the hours earned beyond the bachelor's degree by administrators from innovative and non-innovative systems differ in areas of specialization.

The second research hypothesis which predicted that a greater proportion of administrators from innovative systems would indicate more organizational involvement than those in non-innovative systems was not supported by the data collected. The proportion of administrators from the total sample indicating high organizational involvement was distributed equally among the innovative and non-innovative systems. Furthermore, when the upper and lower thirds of the sample were compared, it was evident that administrators with high organizational involvement were equally divided between the innovative and non-innovative systems.

This result can be viewed in several ways. First, school administrators usually belong to many professional organizations and as a result of their positions as the community's educational leaders they also get involved in many community organizations. This is substantiated by the mean number of organizational memberships and leadership positions held by administrators as indicated in Table 24.

TABLE 24.--Mean number of memberships and leadership positions held by administrators as a group and in major sub-groups.

	Total Mean Involvement		Superintendent Involvement		Secondary Principal Involvement		Elementary Principal Involvement	
	Non-I* Mean	I** Mean	Non-I Mean	I Mean	Non-I Mean	I Mean	Non-I Mean	I Mean
Professional Workshop & Conferences Attended	7.6	7.6	8.0	7.2	7.5	7.2	7.5	8.0
Leadership in Conferences	2.3	2.2	2.5	2.1	2.2	2.7	2.8	2.1
Community Organizational Leadership Positions Held	1.3	1.3	2.5	1.0	1.2	1.5	1.2	1.4
Community Organizational Memberships	2.3	2.1	3.1	1.6	2.3	2.1	2.1	2.3
Professional Organization Memberships	4.3	4.4	4.3	5.1	4.2	3.9	4.2	4.4

* Non-Innovative Mean
**Innovative Mean

	Total Mean Involvement		Superintendent Involvement		Secondary Principal Involvement		Elementary Principal Involvement	
	Non-I* Mean	I** Mean	Non-I Mean	I Mean	Non-I Mean	I Mean	Non-I Mean	I Mean
Professional Organization Leadership Positions Held	.9	1.2	.8	1.4	1.0	1.0	.9	1.2
Total Membership and Leadership Positions Held	9.0	9.2	10.7	9.2	8.9	8.7	8.6	9.5

An examination of the data in Table 24 indicates that the mean number of organizational involvements differs little between administraters from innovative or non-innovative systems. This data indicates that the generalizations in the literature concerning the greater organizational involvement of educational innovators is not supported in the present study. This stems from the fact that most of the generalizations concerning the organizational involvement of educators is based upon research in rural sociology and business rather than education. Educators are involved normally in a number of professional as well as community organizations indicating that organizational involvement does not adequately differentiate between administrators from innovative and non-innovative systems.

Since the second research hypothesis was not supported by the data, this study does not make any statement concerning the relationship between school system innovation and the amount of administrator organizational involvement.

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* Non-Innovative Mean
**Innovative Mean

The third research hypothesis which predicted that a greater proportion of administrators from innovative systems rely upon more information sources than those from non-innovative systems was supported by the data collected. The proportion of administrators using many sources of information was centered in innovative school systems rather than being divided equally between innovative and non-innovative systems. Should the innovativeness of school systems be associated with the number of information sources used as the above results indicate, then administrators who want their systems to be on the growing edge of educational change, must constantly maintain contact with a wide variety of educational information sources.

If this finding is viewed as a basis for future research, it indicates that specific information sources must be investigated to determine at what phase of the curriculum change process awareness, investigation, or decision-making, each source contributes the most.

The fourth hypothesis which predicted that a higher proportion of administrators in innovative systems have more years experience as educators than those in non-innovative systems was not supported by the data for the total sample. However, when administrators from the upper and lower thirds of the sample were categorized as innovative and non-innovative administrators, it was found that a greater proportion of administrators with many years of experience was found in innovative systems rather than non-innovative systems.

This finding has several implications. If the relationship between the innovativeness of the local school systems and the experience as educators of its administrators is viewed as conclusive, then school systems which want to remain on the growing edge of change should hire administrators with many years of experience. In addition, the results indicated that even though the length of service spent as administrators in the local school system is not associated with innovativeness, the total years of experience as administrators is associated with the innovativeness of the local school system. This may mean that local school systems who want to implement more curriculum changes should employ administrators with many years' administrative experience.

Should the results be viewed as a tentative basis for further research, then future studies should investigate how administrators with many years' experience differ from those with few years' experience on crucial dimensions thought to be associated with curriculum change.

The fifth research hypothesis which predicted that a greater proportion of administrators from innovative school systems read more professional journals than those from non-innovative systems was not supported by the data. This result does not support the generalizations found in educational change literature that innovators read more professional journals than non-innovators. However, one should remember that the generalizations concerning educational innovators are based on research in fields other than education where those who first adopt new practices utilize the information from journals more. Further research is needed to determine which professional journals are useful to the curriculum change process and at which stage of the change process these journals have their greatest impact on school administrators.

Since the present findings do not support the fifth research hypothesis, no statement describing the relationship between school system innovativeness and the professional reading habits of their school administrators can be made.

Interpretation of Non-Structured Interview Data

The sixth research hypothesis which predicted that a greater proportion of superintendents from innovative systems used wider teaching staff involvement during curriculum change process than those in non-innovative systems was supported by the data. This result may be interpreted in several ways. If this finding is accepted as conclusive, meaning that a relationship exists between school system innovativeness and the degree administrators involve the teaching staff in curriculum change, then the teaching staff must be meaningfully involved if curriculum change is desired. The data indicates that the teaching staff must not only be involved in proposed curriculum change, but also must be the source of many of the new curriculum practices. In addition, the teaching staff must play a significant role in deciding whether or not to implement or reject proposed changes. These statements are supported by selected comments from the non-structured interviews.

Selected comments from superintendents in innovative systems regarding teaching staff involvement in the curriculum change process:

> "We feel that if the ideas come from the grass roots, then change will be accomplished quicker."

> "I feel that one of the basic reasons we have seen some real progress is that our teachers have started many of our programs and have carried them all the way through."

> "In all our experimental programs the initial interest can obviously be traced to a group of interested teachers."

> "We have always started with the teacher, a successful program is started by the teacher."

Selected comments from superintendents in non-innovative systems regarding teaching staff involvement in the curriculum change process:

> "The teaching staff isn't as productive of ideas as it could be."

> "You have to prod and you have to do the initial leadership."

> "I think the administrators have been the most helpful in developing this awareness."

> "I think that the administrators have usually jumped in and gotten the study rolling."

> "Our administrators usually throw out ideas like, 'This year we are going to study mathematics and next year we are going to study English.'"

Should this finding be viewed as the basis for future research, these studies should replicate the present investigation with larger samples. In addition, future research in this area should be designed so that the superintendents' views on teacher involvement in curriculum change is compared with those of the principals and teachers within the system to determine the reliability of the superintendents' perceptions.

The seventh research hypothesis which predicted that a greater proportion of superintendents from innovative systems recognize the worth and dignity of their teaching staffs than those in non-innovative systems was supported by the data analysis. This finding can be interpreted from many perspectives. If the result is accepted as conclusive, it implies that there is an association between the innovativeness of a school system and the degree to which the administrators recognize the worth and dignity of the teaching staff. This implies that there are items which differentiate superintendents from innovative and non-innovative systems in regard to their recognition of the worth and dignity of teaching staff members. The data analysis indicated that seven of the fifteen dimensions analyzed differentiated between administrators from innovative and non-innovative systems in regard to their treatment of the teaching staff during the curriculum change process. Following are selected comments from the non-structured interviews which support the statistical data. The number of comments quoted varies from one dimension to the next because only comments which were clearly related to the dimensions in question have been included.

Dimension Two

Selected comments from superintendents in innovative systems recognizing the teaching staffs' ability to make significant contributions to curriculum change:

"When changing programs, staff readiness to move ahead is one of the first things I think of in evaluating proposed changes. If they are willing, I can usually find a way."

"You can't buck a teaching staff, they must be for the program if you are going to change."

"The ones to teach and carry out the program must be the ones to develop the program because those who are to put it into effect must have a stake in it."

"When we recommend new programs to the board, we bring on the teachers who are more capable of explaining the technical program than the administrators."

"If the teachers aren't enthused about a new program, it's almost impossible for the administrator to effectively introduce the program."

Selected comments from superintendents in non-innovative systems regarding the teaching staffs' ability to make significant contributions to curriculum change:

"The administrators only have the time to investigate new approaches."

"It's not that our teachers aren't willing, it's that they don't know about the new practices."

"As you know, the older teachers on any staff are less susceptible to change than the younger ones."

"It's hard to involve teachers in curriculum change; they aren't committed."

Dimension Three

Selected comments from superintendents in innovative systems recognizing the teaching staffs' sincerity to improve the curriculum:

"Our curriculum committees last year were so enthusiastic about the new programs being developed for the high school that they often met on Saturdays and Sundays."

"We rely on the teachers' recommendations. We feel they are based on thought and study and go quite a way toward implementing it."

"When teachers are given leadership positions, they do things to themselves, which if I had done them, they would hit the ceiling, such as; for example, meeting evenings, summers, etc."

"The reason why we have gone into so many new programs is the enthusiasm of the teachers."

Selected comments from superintendents in non-innovative systems regarding the sincerity of the teaching staff to improve the curriculum:

"I feel that the staffs' knowledge of the lack of monies will dull their enthusiasm to work."

"I think the reason many teachers resist change is that as they get older, they get tired and aren't enthused about new things."

"We've been involving teachers as best we can, but they are a little reluctant to participate in curriculum change. They want change in curriculum, but are a little reluctant to say what they really want."

"When you take the number of married women who are competent teachers and keeping up a home as well as a full day's work in school, you find that there is a limit in how much you can push them into attending meetings after school."

Dimension Six

Selected comments from superintendents in innovative systems recognizing the worth of involving the teaching staff in leadership positions during curriculum change:

"Leadership for curriculum improvement in our system often times comes from a key teacher rather than a principal."

"Since the teachers requested the in-service days, we felt it essential to use this emerging leadership. They have their own steering committee, leadership, recorders, etc."

"We definitely feel that it is important that teachers assume leadership positions in our curriculum studies. The staff feels it is no edict and their own product."

"In any study group you have to have leadership. If you have a good teacher she can do the job just as well as the administrators. In fact, leadership has come most often in our system from the teachers in the new programs."

Selected comments from superintendents in non-innovative systems regarding the involvement of the teaching staff in leadership positions during curriculum change.

"Our elementary coordinator selects all the elementary curriculum committees and serves as chairman of each."

"Our curriculum study groups are organized under the local school principals or secondary school department heads and all recommendations are passed up the chain of command to the superintendent."

"I think that the principals should take chairmanships because they are a little better trained."

"You have to prod and you have to do the initial leadership."

Dimension Twelve

Selected comments from superintendents in innovative systems recognizing the worth of encouraging teaching staff members not to fear failure when implementing new curriculum practices.

"We provide a climate where the program is not rigidly defined and this has helped get our teachers experimenting with new approaches."

"If I'm not sold on a point and feel that the recommendation may fail, I still feel that it is worth experimenting with."

"I like to create the atmosphere that you can't be successful 100% of the time. I make mistakes, and I recognize that my staff will if they are trying to improve."

"We feel that if teachers come up with ideas and are willing to try them out, they should be encouraged."

"I don't care how ridiculous the idea might be. We encourage teachers to experiment with it and evaluate the experience."

> "If you don't let the teachers try what's on their minds, you're going to have a bunch of puppets."

Selected comments from superintendents in non-innovative systems regarding the worth of encouraging teaching staff members not to fear failure when implementing new curriculum practices:

> "We cannot afford to experiment with kids. Experimenting implies you win sometimes and lose sometimes and with kids you can't lose."

> "We feel that the administration has to give direction and that the staff looks to us for direction."

> "We have never been a leader in curriculum change; perhaps we should but we have a conservative community."

> "We have a kind of older faculty and they are kind of set in their ways."

Dimension Thirteen

Selected comments from superintendents in innovative systems recognizing the value of giving the teaching staffs' feelings and desires priority in curriculum decision-making:

> "I think a directive from the administrative council would have an impact on the teaching, a very detrimental effect. You can get further if the teachers are given a significant part in the total planning, evaluation, and decision-making."

> "The wise administrator will let the teacher honestly feel that she has had quite a part in bringing about the change."

> "We believe that wide staff participation in the total change process is necessary if you are going to have true change."

> "If the change is to be more than on paper only, wide staff participation is necessary."

> "If the teachers are committed and have placed a lot of effort into a recommendation, we go as far as our budget allows to implement it."

Selected comments from superintendents in non-innovative systems regarding the value of giving the teaching staffs' feelings and desires priority in curriculum decision-making:

"Our principals approach a change by stating we are going to try this, this year. Don't you think it's a good idea?" "That's the best kind of salesmanship you can use."

"Our elementary coordinator brings his ideas to the study group members because he does a lot of reading and knows most of the materials available in the area."

"In our system the assistant superintendent gives much guidance to the topic studied at each grade level. Probably much more than I'm led to believe, but he advises me that it came from the teachers."

"We feel that the administrators have to give direction and that the staff looks to us for direction."

Dimension Fourteen

Selected comments from superintendents in innovative systems recognizing their role as facilitating teaching staff involvement in curriculum change rather than dominating it:

"It's the cooperative working together which makes all programs more successful."

"I don't look at it as a personal gain if we have something successful. I would rather give the teacher the credit and have a successful staff. Then it will look like I have done a successful job."

"I try to create the idea that I am one of the staff at their level rather than up on the throne above them."

"We try to create an atmosphere where the teachers feel that anything in the instructional program can be had."

Selected comments from superintendents in non-innovative systems regarding their role as facilitating teaching staff involvement in curriculum change rather than dominating it.*

"We have this agreement with all study groups. They are advisory only and we control. We tell them you win some and lose some."

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*The writer found it difficult to quote specific statements, word for word, from the non-innovative superintendents in regard to dimensions fourteen and fifteen. A composite of many instances throughout the interviews indicated that the superintendents from non-innovative systems felt the same way as the quoted comments on these two dimensions.

Dimension Fifteen

Selected comments from superintendents in innovative systems recognizing the value of a teaching staff committed to individual student progress rather than achievement of arbitrary subject matter standards:

> "Interest in kids is the most important factor in hiring teachers."

> "I look for teachers who can work effectively with students. I'm not as concerned about the content of the biology class, but I'm interested in the teacher who can make biology interesting."

> "What is going to help pupils or people must be the orientation of teachers."

> "I despise the teacher who is subject matter oriented. I feel that if we could take six months and talk about how people could get along better, we would be better off."

> "One of the most important things I look for is the ability to work with people. To get along with people and understand them. This is one of the most critical areas."

Selected comments from superintendents in non-innovative systems regarding the value of a teaching staff committed to individual student progress rather than achievement of arbitrary subject matter standards:*

> "We want people who have a good academic training. This is most important."

> "I look for specialists in their areas."

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*The writer found it difficult to quote specific statements, word for word, from the non-innovative superintendents in regard to dimensions fourteen and fifteen. A composite of many instances throughout the interviews indicated that the superintendents from non-innovative systems felt the same way as the quoted comments on these two dimensions.

Summary

This chapter analyzed the data collected by the survey instrument and the non-structured interviews. The analysis of the seven hypotheses indicated that administrators in innovative systems differed from those in non-innovative systems in the following manner: (1) a greater number of information sources are relied upon for new curriculum practices, (2) more years of school administration experience, (3) more years of total professional educational experience, (4) a greater involvement of their teaching staffs in curriculum change, and (5) a greater recognition of the worth and dignity of their teaching staffs.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This chapter summarizes the study from its inception through the interpretation of the data. A number of specific recommendations for possible actions and future study will be presented.

Summary

The Problem

This study was designed to collect empirical evidence concerning the association between selected school administrative behaviors and the adoption of new educational practices by their school systems.

This study was based upon the behavioral descriptions of innovative school administrators found in the educational and general innovation literature. Of special concern in this investigation was evidence substantiating or rejecting the generalizations made concerning the behavior of school administrators found in previous innovation research.

The Design

This study was based upon the following assumptions:

1. The educational cost factors of school systems, enrollment, operational millage allocated, state equalized evaluation, and expenditure per pupil do not have a direct relationship with the innovativeness of the local school systems as determined by the constructed innovation scale.

2. The actions and behaviors of school administrators have a significant influence on the introduction of new curriculum practices into school systems.

3. Selected administrative behavioral dimensions are associated with the number of new educational practices introduced into local school systems.

4. Selected administrative behavioral dimensions associated with the introduction of new educational practices can be identified.

5. School administrators from innovative systems differ from school administrators in non-innovative systems on selected administrative behavioral dimensions.

This study was concerned with analyzing administrators from selected school systems at the extreme ends of the distribution of innovative scores constructed from the "1963 Five Years Survey of Progress in Michigan Schools" by John Childs in cooperation with the Michigan Department of Public Instruction. The school system sample was chosen on the basis of these educational cost factors: school system size, school system millage allocation, school system state equalized evaluation per pupil, and school system expenditure per pupil. The administrator sample selected from these school systems was further delimited by requiring that they have served at least three years in their present positions and that they be either the superintendent or full time elementary or secondary principals.

The education and general innovation literature indicated a number of administrative behavioral dimensions which appeared associated with the adoption of new educational practices. A review of the literature indicated a need for substantiation of the association between the adoption of new educational practices and selected administration behavioral dimensions.

The following seven general hypotheses were constructed for statistical testing:

H_1 Administrators in innovative school systems will earn a greater number of semester hours beyond the bachelor's degree than will administrators in non-innovative school systems.

H_2 Administrators in innovative school systems will indicate more organizational involvement than will administrators in non-innovative school systems.

H_3 Administrators in innovative school systems will use a greater number of information sources than will administrators in non-innovative systems.

H_4 Administrators in innovative school systems will have more years experience as educators than will administrators in non-innovative school systems.

H_5 Administrators in innovative school systems will read more professional journals than will administrators in non-innovative school systems.

H_6 Superintendents in innovative school systems will use wider teaching staff involvement when instituting curriculum changes than will superintendents in non-innovative school systems.

H_7 Superintendents in innovative school systems will recognize the worth and dignity of teaching staff members more when instituting curriculum changes than will superintendents in non-innovative school systems.

A survey instrument was developed to provide the data necessary for analyzing the first five hypotheses. The data for the remaining two hypotheses was collected by non-structured interviews. The statistical design used for testing the hypotheses consisted of chi-square test, Fisher Exact Probability Test, and selected responses collected through the non-structured interviews.

The reliability of the survey instrument's responses was checked by asking two randomly selected superintendents (without their knowledge) all the questions on the survey instrument during their non-structured interviews. These responses were compared to the written responses of the superintendents on the survey instrument. The two superintendents' responses indicate nearly 95% agreement. The reliability of the interview data classification system was determined by comparing the researcher's classification of the responses on a randomly selected interview transcript with that of a college professor of similar educational background and a public school administrator. Using the Fisher Exact Probability Test to compare the classifications of the writer with each of the others resulted in no significant differences being found between any of the three categorizations of the non-structured interview data.

The present study is limited in the following ways:

1. The validity of the variable is directly related to the survey instrument and non-structured interview schedule used to identify selected administrator behaviors. The quality of the data derived from the survey instrument and interviews is directly related to the skill, knowledge, and technique of the investigator in phrasing questions precisely. The pilot administrations of the survey instrument and interview schedule along with constant revision during construction of both, however, should hold response error to a minimum.

2. The assistance provided by the Michigan Department of Public Instruction in collecting the data could affect the validity of the school administrators' responses on both the survey instrument and non-structured interviews if they should perceive this study as a form of State Education Department evaluation of their leadership in curriculum development. The letter of instructions accompanying each survey instrument assured the administrators of the anonymity of their responses, and the superintendents involved in the non-structured interviews were assured at the beginning of the interviews that their responses would remain anonymous.

3. The analysis performed upon the data in this study is limited to testing the significance of different frequencies of school administrators categorized on the basis of a number of selected administrative behavioral dimensions and the degree of innovativeness of their school systems. The statistical analyses were performed on the total group of administrators and upon selected sub-groups categorized according to their current employment positions.

4. In this study the administrator population is limited to all superintendents and full time principals who have served in these capacities for the previous three years. The twenty school systems participating in the study were not selected randomly and no attempt should be made to generalize the results of this investigation beyond the population of this study.

5. In this study four selected cost factors were considered in each school system including enrollment, operational millage allocation, state equalized evaluation, and expenditure per pupil which are all combined as a single composite cost factor. This composite cost factor is not intended to be inclusive.

6. The results of this study should be interpreted as an indication of an association between the various administrative behavioral dimensions and the school systems' innovativeness, but not as a direct causal relationship between these variables.

Analysis of Survey Instrument Data

The data analysis indicated that no statement can be made concerning the first null hypothesis. This hypothesis which predicted no difference in the number of semester hours earned beyond the bachelor's degree by administrators in innovative and non-innovative systems could not be rejected at the alpha=.05 level. The analysis found that the second null hypothesis which predicted no difference in the organizational involvement of the administrators from innovative and non-innovative systems also could not be rejected at the alpha=.05 level.

The third null hypothesis which predicted no difference in the use of information sources used, between administrators in innovative and non-innovative systems was rejected at the alpha=.05 level. This finding was interpreted from many perspectives in the discussion section of Chapter V. Basically, it indicates that a larger proportion of administrators from innovative systems used many more sources of information for new curriculum practices than those from non-innovative systems.

The fourth null hypothesis which predicted no difference in the number of years spent in education by administrators from innovative and non-innovative systems was rejected at the alpha=.05 level. The analysis of the data also found that administrators from innovative and non-innovative systems differed significantly at the alpha=.05 level in number of years of administrative experience. This finding indicates that school administrators in innovative systems have more years experience as educators in general and school administrators in particular than those in non-innovative systems. The fifth null hypothesis which predicted no difference in the reading of professional journals by administrators from innovative and non-innovative systems was not rejected at the alpha=.05 level. A number of interpretations concerning this result were presented in the discussion section of Chapter IV.

Analysis of Non-Structured Interview Data

Analysis of the non-structured interview data found that the sixth null hypothesis, which predicted no difference in teaching staff involvement during curriculum change by the superintendents from innovative and non-innovative systems, can be rejected at the alpha=.05 level. This finding indicates that a greater proportion of superintendents from innovative systems used wider teaching staff involvement in curriculum change than those in non-innovative systems. The analysis also found that superintendents from innovative systems involved their teaching staff significantly more during the awareness and decision-making phases of the curriculum change process than those in non-innovative systems.

The seventh null hypothesis which predicted that the superintendents do not differ in their recognition of the worth and dignity of their teaching staffs, was rejected at the alpha=.05 level. These results indicate that a greater proportion of superintendents from innovative systems recognize the worth and dignity of their teaching staffs on several predetermined administrative behavioral dimensions than those from non-innovative systems. When the fifteen behavioral dimensions were analyzed to determine which differentiated between superintendents from innovative and non-innovative systems at the alpha=.05 level the following seven were found significant:

1. Recognition of teaching staffs' ability to contribute to curriculum improvement.

2. Recognition of teaching staffs' sincerity to improve the curriculum.

3. Recognition of teaching staffs' leadership ability in curriculum improvement.

4. Recognition of the need to encourage their teaching staff not to fear failure when instituting new educational practices.

5. Recognition of the importance of teaching staffs' desires rather than finances in curriculum decision-making.

6. Recognition of administrators' role as facilitating curriculum change rather than dominating it.

7. Recognition of the importance of a teaching staff interested in student progress rather than one interested in achievement of arbitrary subject matter standards.

Conclusion

The purpose of this study was to test selected generalizations concerning the behaviors of school administrators found in the general and educational innovation literature. These generalizations describing school administrators have usually been based upon research in areas other than education. The data collected and analyzed in the present study suggests that the following conclusions can be drawn:

1. School administrators from innovative and non-innovative systems complete a similar number of semester hours beyond the bachelor's degree. This indicates that the "educational preparation dimension" does not differentiate between administrators from innovative and non-innovative systems. This conclusion is contrary to the generalizations found in educational and general innovation literature concerning the greater formal educational preparation of administrators from innovative systems.

2. School administrators from innovative and non-innovative systems have similar patterns of professional and community organizational involvements. This conclusion is contrary to the generalizations found in educational and general innovation literature concerning the greater organizational involvement of administrators from innovative systems when compared with those in non-innovative systems.

3. School administrators from innovative systems rely upon more information sources for new curriculum ideas than those in non-innovative systems. This conclusion substantiates the generalizations found in the general and educational literature concerning the actions of school administrators on this dimension.

4. School administrators from innovative systems were not found to rely more upon any particular source of information for new curriculum ideas than those from non-innovative systems. This conclusion is contrary to the generalizations found in educational and general innovation literature concerning the greater reliance of administrators from innovative systems upon more cosmopolitan sources of information.

5. School administrators from innovative systems have more years' experience as educators than those from non-innovative systems.

6. School administrators from innovative systems have more years' experience as school administrators than those from non-innovative systems.

7. School administrators from innovative systems have served approximately the same length of time in their present administrative positions as those from non-innovative systems. This indicates that the crucial element associated with the innovativeness of a school system is not length of administrative service in present position but total administrative experience.

8. School administrators from innovative systems have spent the same number of years as classroom teachers as those in non-innovative systems.

9. School administrators in innovative systems read the same number of professional journals as those in non-innovative systems. This conclusion is contrary to the generalizations found in the general and educational innovation

literature concerning the wider reading habits of school administrators from innovative systems when compared with those from non-innovative systems.

10. School superintendents from innovative systems involve more of their teaching staffs in the curriculum change process than those from non-innovative systems.

11. Superintendents in innovative school systems involve their teaching staffs more in the awareness and decision-making phases of the curriculum change process than those in non-innovative systems. This indicates that superintendents from innovative systems are more willing to share responsibilities for change initiation and decision-making with their teaching staffs than those in non-innovative systems.

12. The data indicates that superintendents in innovative systems recognize the worth and dignity of their teaching staffs more when changing the curriculum than those in non-innovative systems. Specifically, the superintendents from innovative systems recognize:

a. their teaching staffs' ability to contribute to curriculum improvement.

b. their teaching staffs' sincerity to improve the curriculum.

c. their teaching staffs' leadership ability in curriculum improvement.

d. the need to encourage teaching staffs not to fear mistakes when instituting new curriculum practices.

e. the importance of their teaching staffs' desires rather than finances in curriculum decision-making.

f. their administrative role as facilitating curriculum change rather than dominating it.

g. the importance of a teaching staff interested in student progress rather than one interested only in arbitrary subject matter standards.

Recommendations

The following recommendations are made for further research:

1. The present study be replicated with following changes in design:

a. random selection of school systems.

b. constructed innovativeness scores to be determined by present emerging curriculum changes rather than past changes.

c. in-depth analysis of administrative-teacher interactions during the change process.

2. The administrator perceptions of their treatment of the teaching staff should be sustantiated for reliability by the teaching staffs' perception of the same situation.

3. The semester hours earned beyond the bachelor's degree should be analyzed in depth to determine if course profile differences exist between administrators from innovative and non-innovative school systems.

4. The specific type of administrator involvement in professional and community organizations should be functionally defined prior to the analysis of differences between administrators from innovative and non-innovative systems.

5. The importance of specific information sources should be determined for the awareness, investigation, and decision-making phases of the curriculum change process.

6. The importance of the selected professional journals should be determined for the awareness, investigation, and decision-making phases of the curriculum change process.

7. The administrators' descriptions of teaching staff involvement at the awareness, investigation, decision-making phases should be substantiated for reliability by the teaching staffs' description of the same process.

8. The administrators' perception of their recognition of teaching staffs' worth and dignity should be substantiated by the teaching staffs' perception of administrator treatment on the same dimension.

9. The administrators from urban, small towns and rural K-12 school systems should be compared with non-innovative administrators from the same typed districts only rather than with each other (urban administrators with urban administrators only etc.).

APPENDIX

Exhibit 1

Recognition of Teaching Staffs' Worth and Dignity Dimension

The degree that the superintendent recognizes and values:

1. The teaching staffs' ability to contribute to curriculum improvement.

2. The teaching staffs' sincerity in efforts to improve the curriculum.

3. The teaching staffs' desires and feelings when decisions concerning new curriculum practices are made.

4. The diversity inherent in the teaching staff.

5. The utilization of the teaching staff in leadership positions when improving the curriculum.

6. The provision of administrative support to the teaching staff during and after the curriculum change process.

7. The provision for interested teaching staff members to experiment with new curriculum practices.

8. Providing the teaching staff with released time to improve the curriculum.

9. Justifying the rejection of the teaching staffs' recommendations for curriculum improvement.

10. Teaching staffs' commitment and readiness when deciding to support or reject curriculum changes.

11. Encouraging the teaching staff to try new curriculum practices without fear of failure.

12. Creating a climate for change where the teaching staffs' desires are placed before material questions in curriculum decision-making.

13. Facilitation of the curriculum change process rather than dominating it.

14. Teaching staff commitment to the development of each child over the achievement of arbitrary subject matter standards.

15. The praising of the teaching staff for contributions to curriculum improvement.

Exhibit 2

INSTRUCTIONS FOR COMPLETING THIS SURVEY OF FIVE YEARS OF PROGRESS IN PUBLIC EDUCATION IN MICHIGAN

SECONDARY FORM

THESE INSTRUCTIONS ARE TO BE USED TO COMPLETE THIS QUESTIONNAIRE FORM

PART I

Page 2. Simply check the appropriate column year (or years) when a change was made in organization in your school as indicated by classifications (a) through (q). If there are any organization changes which do not appear on the list, add them to the list and check appropriate year (or years) in effect.

Example—If Team Teaching was begun in 1960-61 and is still practiced then check (h) Team Teaching in columns 1960-61, 1961-62, 1962-63.

Page 3. Complete Columns (A) through (I) to indicate details regarding organizational changes made.

Example—If Team Teaching (h) was practiced in Science classes, see line (h) under first column (marked Part I, Page 2, Code No.). For this, under Column A, write in "Science" alongside (h). Continue along the same line to indicate information called for with regard to Team Teaching (h) in Science under columns (B), (C), (D), and (E). Under (F) and (G), use code details on page 4 and indicate code number in each column. Complete columns (H) and (I) according to your judgment.

Page 4. Items (3) and (4), Self-explanatory.

PART II

Page 5. Simply check the appropriate column year (or years) when a curriculum change was made in your school as identified by classifications (a) through (i). If there were any curriculum changes which do not appear on the list, add them to the list and check appropriate year (or years) in effect.

Page 6. Complete Columns (B) through (J) to indicate details regarding curriculum changes made.

Example—If Foreign Languages was checked on page 5, check and indicate number if special personnel were hired, column (B) and complete columns (C), (D) and (E). Under (F) and (G), use code details on page 7 and indicate code number in each column. Complete columns (H), (I) and (J) according to your judgment.

Page 7. Items (3) and (4), Self-explanatory.

PART III

Page 8. A project which is more research oriented than those identified on previous pages may have been completed or is in process in your school. Indicate here the title of the project, its nature (briefly) and the name of the individual(s) actually involved in the planning or implementation. While the Superintendent or Principal may have overall responsibility for the project, what is wanted here is the person(s) actually responsible for conducting the research. Please supply other data requested.

Exhibit 2

.... Name of School .... Grade Range

.... Enrollment .... Person Completing Report

A SURVEY OF FIVE YEARS
OF
PROGRESS IN PUBLIC EDUCATION IN MICHIGAN

SECONDARY FORM

Part I—SECONDARY ORGANIZATION

1. Have there been any notable organization changes in the secondary school program in your building since the 1957-58 school year?

Yes.............. No..............

Note: Here we are concerned primarily with changes which have affected the organizational structure of the secondary program. Listed below are examples of changes which you may have introduced:

(Check year for which changes were made. If new practice was dropped, indicate by circling check for that year.)

	1957-58 Or Earlier	1958-59	1959-60	1960-61	1961-62	In Process 1962-63
a. Departmentalization - - -						
b. Core or Block Time - - -						
c. Ungraded Classrooms - -						
d. Change from Semi-Annual to Annual Promotion - - -						
e. Extended School Year - -						
f. Longer School Day - - -						
g. Staggered Sessions - - -						
h. Team Teaching - - - -						
i. Additional Staff Specialist (counselor, foreign language teacher, etc.) - - - -						
j. Educational TV Classes - -						
k. Advanced Placement - - -						
l. Counseling and Guidance - -						
m. Special Education - - -						
n. Secondary Curriculum Study Committees - - - - -						
o. Homogeneous Grouping - -						
p. Programmed Instruction - -						
q. Others (Specify)................						
r.						
s.						

Exhibit 2

3. **Please complete the appropriate squares below for those innovations checked on Page 2. These responses should be for the latest year checked: (Please note the left column is coded to the innovations on Page 2.)**

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)				
Part 1 Page 2, Code Number	Where Appropriate, Indicate Subject Areas Such as English, Science, Etc.	Specify if Special Personnel Were Hired for Project	Actual Number of Grades Involved	Estimate Number of Students Involved	School Minutes per Week for this Activity. Indicate where Appropriate	Indicate from Code the Agency Most Helpful*	Indicate from Code Group Most Responsible for causing Program to Begin*	Check those Innovations which are to be Continued	Indicate Judgment of the Effectiveness of Program				
									Excellent	Good	Fair	Not Working as Planned	Pro gra Dis con tinu
a.													
b.													
c.													
d.													
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f.													
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m.													
n.													
o.													
p.													
q.													
r.													
s.													

*Code details to complete Columns "F" and "G" listed on Page 4.

Code Details—Column F

Agency which provided most consultative assistance to local school with special projects.
Place the appropriate number from the list below in the appropriate squares on the previous page.

(1) Department of Public Instruction

(2) State Curriculum Committee of the Department of Public Instruction

(3) Colleges or Universities

(4) County Education Office

(5) Other School Districts

(6) Others (Specify)..........

(7) ....

(8) ....

Code Details—Column G

Individual or group most responsible for causing program changes.
Place the appropriate number from the list below in the appropriate squares on the previous page.

(1) School Board
(2) Teachers
(3) Pupils
(4) Community Group
(5) Department of Public Instruction
(6) North Central Regional Accrediting Association
(7) Colleges and Universities
(8) University of Michigan Bureau of School Services (Accreditation)
(9) Superintendent
(10) Principal
(11) County Education Office
(12) Others (Specify)..........
(13) ....

3. Please send any reports, materials, studies or articles which would support your appraisal that the innovations have improved the secondary program. Please indicate below what materials are being sent:

a. ....

....

b. ....

....

c. ....

....

d. ....

....

4. If you wish to describe in greater detail any secondary organization changes named herein, please do so on additional pages.

Exhibit 2

Part II—SECONDARY CURRICULAR OFFERINGS

Since the school year 1957-58, many local school systems have worked to up-date specific sections of their secondary school programs. Please specify below for the year or years involved, which of the following subject areas have been strengthened in your system:

1. Have there been any notable curriculum changes in the secondary school program in your building since the 1957-58 school year?

Yes.............. No..............

Note: Here we are concerned primarily with changes which have affected the curriculum of the secondary program. Listed below are examples of changes which you may have introduced:
(Check year for which changes were made. If new practice was dropped, indicate by circling check for that year.)

	1957-58 Or Earlier	1958-59	1959-60	1960-61	1961-62	In Process 1962-63
a. Comparative Government -						
b. Economic Education - -						
c. English - - - - - -						
d. Foreign Languages - - -						
e. Mathematics - - - -						
f. Physical Education - - -						
g. Science - - - - - -						
h. Social Studies - - - -						
i. Special Education (See Instructions) - - -						

Have there been any notable curriculum changes in other areas? If so, indicate below.

j.						
k.						
l.						

Exhibit 2

2. Please complete the appropriate squares below for those innovations checked on Page 5. These responses should be for the latest year checked: (Please note the left column is coded to curricular offerings on Page 5.)

	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)				
Part II Page 5, Code Number	Specify if Special Personnel Were Hired for Project	Actual Number of Grades Involved	Estimate Number of Students Involved	School Minutes per Week for this Activity. Indicate where Appropriate	Indicate from Code the Agency Most Helpful*	Indicate from Code Group Most Responsible for Causing Program to Begin*	Check those Innovations Which are to be Continued	Specify if Program is ACCELERATED or for SLOW LEARNERS	Indicate Judgment of the Effectiveness of Program				
									Excellent	Good	Fair	Not Working as Planned	Pro gra Dis con tinu
a.													
b.													
c.													
d.													
e.													
f.													
g.													
h.													
i.													
j.													
k.													
l.													

*Code details to complete Columns "F" and "G" listed on Page 7.

Exhibit 2

Code Details—Column F

Agency which provided most consultative assistance to local school with special projects.
Place the appropriate number from the list below in the appropriate squares on the previous page.

(1) Department of Public Instruction

(2) State Curriculum Committee of the Department of Public Instruction

(3) Colleges or Universities

(4) County Education Office

(5) Other School Districts

(6) Others (Specify)..

(7) ....

(8) ....

Code Details—Column G

Individual or group most responsible for causing program changes.
Place the appropriate number from the list below in the appropriate squares on the previous page.

(1) School Board

(2) Teachers

(3) Pupils

(4) Community Group

(5) Department of Public Instruction

(6) Colleges or Universities

(7) Superintendent

(8) Principal

(9) County Education Office

(10) Others (Specify)..

(11) ....

3. Please send any reports, materials, studies or articles which would support your appraisal that the innovations have improved the secondar program. Please indicate below what materials are being sent:

a. ....
....

b. ....
....

c. ....
....

d. ....
....

4. If you wish to describe in greater detail any secondary curriculum changes named herein, please do so on additional pages.

Table III—SECONDARY EDUCATIONAL RESEARCH ACTIVITIES

Name and position of person filling out this report..........

....

....
Name of school building and school system Range of grades covered by this report

1. Please list below any educational research or studies conducted in your school since the 1960-61 school year. Be as specific as possible, e.g. "A study of the effect of television instruction on the achievement of pupils in U. S. History." Include any completed reports or demonstration project materials that you have available. Mention grade level and number of students involved. Please list here even though activity may have been referred to in Parts I or II of this questionnaire.

a. ....
Name of educational research or study Date Study Began

....
Name of person in your school conducting study Grades Involved

..........Number of students involved ....Completed ....In progress ....Written report available

b. ....
Name of educational research or study Date Study Began

....
Name of person in your school conducting study Grades Involved

..........Number of students involved ....Completed ....In progress ....Written report available

2. Please list below any educational research or studies in process or contemplated in your school during the 1962-63 school year. Please mention grade level and number of students involved.

a. ....
Name of educational research or study Date Study Began

....
Name of person in your school conducting study Grade Students

b. ....
Name of educational research or study Date Study Began

....
Name of person in your school conducting study Grade Students

3. Please name the staff member in your school you feel most competent and most interested in educational research, innovations or studies.

....
Name Title

USE ADDITIONAL SHEETS IF NECESSARY

Please include any completed research or study reports that are available.

INSTRUCTIONS FOR COMPLETING THIS SURVEY OF FIVE YEARS OF PROGRESS IN PUBLIC EDUCATION IN MICHIGAN

Elementary Form

THESE INSTRUCTIONS ARE TO BE USED TO COMPLETE THIS QUESTIONNAIRE FORM

PART I

Page 2. Simply check the appropriate column year (or years) when a change was made in organization in your school as indicated by classifications (a) through (q). If there are any organization changes which do not appear on the list, add them to the list and check appropriate year (or years) in effect.

Example—If Team Teaching was begun in 1960-61 and is still practiced then check (h) Team Teaching in columns 1960-61, 1961-62, 1962-63.

Page 3. Complete Columns (A) through (I) to indicate details regarding organizational changes made.

Example—If Team Teaching (h) was practiced in Science classes, see line (h) under first column (marked Part I, Page 2, Code No.). For this, under Column A, write in "Science" alongside (h). Continue along the same line to indicate information called for with regard to Team Teaching (h) in Science under columns (B), (C), (D), and (E). Under (F) and (G), use code details on page 4 and indicate code number in each column. Complete columns (H) and (I) according to your judgment.

Page 4. Items (3) and (4), Self-explanatory.

PART II

Page 5. Simply check the appropriate column year (or years) when a curriculum change was made in your school as identified by classifications (a) through (i). If there were any curriculum changes which do not appear on the list, add them to the list and check appropriate year (or years) in effect.

Page 6. Complete Columns (B) through (J) to indicate details regarding curriculum changes made.

Example—If Foreign Languages was checked on page 5, check and indicate number if special personnel were hired, column (B) and complete columns (C), (D) and (E). Under (F) and (G), use code details on page 7 and indicate code number in each column. Complete columns (H), (I) and (J) according to your judgment.

Page 7. Items (3) and (4), Self-explanatory.

PART III

Page 8. A project which is more research oriented than those identified on previous pages may have been completed or is in process in your school. Indicate here the title of the project, its nature (briefly) and the name of the individual(s) actually involved in the planning or implementation. While the Superintendent or Principal may have overall responsibility for the project, what is wanted here is the person(s) actually responsible for conducting the research. Please supply other data requested.

Part III—ELEMENTARY EDUCATIONAL RESEARCH ACTIVITIES

Name and position of person filling out this report……………………………………

……………………………………

Name of school building and school system …… Range of grades covered by this report

1. Please list below any educational research or studies conducted in your school since the 1960-61 school year. Be as specific as possible, e.g. "A study of the effect of television instruction on the achievement of pupils in U. S. History." Include any completed reports or demonstration project materials that you have available. Mention grade level and number of students involved. Please list here even though activity may have been referred to in Parts I or II of this questionnaire.

a. ……………………………………
Name of educational research or study …… Date Study Began

……………………………………
Name of person in your school conducting study …… Grades Involved

……………Number of students involved ……………Completed ……………In progress ……………Written report available

b. ……………………………………
Name of educational research or study …… Date Study Began

……………………………………
Name of person in your school conducting study …… Grades Involved

……………Number of students involved ……………Completed ……………In progress ……………Written report available

2. Please list below any educational research or studies in process or contemplated in your school during the 1962-63 school year. Please mention grade level and number of students involved.

a. ……………………………………
Name of educational research or study …… Date Study Began

……………………………………
Name of person in your school conducting study …… Grade …… Students

b. ……………………………………
Name of educational research or study …… Date Study Began

……………………………………
Name of person in your school conducting study …… Grade …… Students

3. Please name the staff member in your school you feel most competent and most interested in educational research, innovations or studies.

……………………………………
Name …… Title

USE ADDITIONAL SHEETS IF NECESSARY

Please include any completed research or study reports that are available.

Code Details—Column F

Agency which provided most consultative assistance to local school with special projects.
Place the appropriate number from the list below in the appropriate squares on the previous page.

(1) Department of Public Instruction
(2) State Curriculum Committee of the Department of Public Instruction
(3) Colleges or Universities
(4) County Education Office
(5) Other School Districts
(6) Others (Specify)..
(7) ....
(8) ....

Code Details—Column G

Individual or group most responsible for causing program changes.
Place the appropriate number from the list below in the appropriate squares on the previous page.

(1) School Board
(2) Teachers
(3) Pupils
(4) Community Group
(5) Department of Public Instruction
(6) Colleges or Universities
(7) Superintendent
(8) Principal
(9) County Education Office
(10) Others (Specify)..
(11) ....

3. Please send any reports, materials, studies or articles which would support your appraisal that the innovations have improved the elementa program. Please indicate below what materials are being sent:

a. ....
....

b. ....
....

c. ....
....

d. ....
....

4. If you wish to describe in greater detail any elementary curriculum changes named herein, please do so on additional pages.

Name of School .... Grade Range ....

Enrollment .... Person Completing Report ....

A SURVEY OF FIVE YEARS
OF
PROGRESS IN PUBLIC EDUCATION IN MICHIGAN

ELEMENTARY FORM

Part I—ELEMENTARY ORGANIZATION

1. Have there been any notable organization changes in the elementary school program in your building since the 1957-58 school year?

Yes.............. No..............

Note: Here we are concerned primarily with changes which have affected the organizational structure of the elementary school program. Listed below are examples of changes which you may have introduced:

(Check year for which changes were made. If new practice was dropped, indicate by circling check for that year.)

	1957-58 Or Earlier	1958-59	1959-60	1960-61	1961-62	In Process 1962-63
a. Departmentalization - - -						
b. Self-contained Classrooms -						
c. Ungraded Classrooms - -						
d. Change from Semi-Annual to Annual Promotion - - -						
e. Extended School Year - -						
f. Longer School Day - - -						
g. Staggered Sessions - - -						
h. Team Teaching - - - -						
i. Additional Staff Specialist (counselor, foreign language teacher, etc.) - - - -						
j. Educational TV Classes - -						
k. Accelerated Classes - - -						
l. Counseling and Guidance - -						
m. Special Education - - -						
n. Elementary Curriculum Study Committees - - - - -						
o. Homogeneous Grouping - -						
p. Programmed Instruction - -						
q. Others (Specify)........................						
r.						
s.						

2. **Please complete the appropriate squares below for those innovations checked on Page 2. These responses should be for the latest year checked: (Please note the left column is coded to the innovations on Page 2.)**

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)				
Part I Page 2, Code Number	Where Appropriate, Indicate Subject Areas Such as English, Science, Etc.	Specify if Special Personnel Were Hired for Project	Actual Number of Grades Involved	Estimate Number of Students Involved	School Minutes per Week for this Activity. Indicate where Appropriate	Indicate from Code the Agency Most Helpful*	Indicate from Code Group Most Responsible for causing Program to Begin*	Check those Innovations which are to be Continued	Indicate Judgment of the Effectiveness of Program				
									Excellent	Good	Fair	Not Working as Planned	Pro gra Dis con tinu
a.													
b.													
c.													
d.													
e.													
f.													
g.													
h.													
i.													
j.													
k.													
l.													
m.													
n.													
o.													
p.													
q.													
r.													
s.													

***Code details to complete Columns "F" and "G" listed on Page 4.**

2. **Please complete the appropriate squares below for those innovations checked on Page 5. These responses should be for the latest year checked: (Please note the left column is coded to curricular offerings on Page 5.)**

	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)				
rt II ge 5, ode mber	Specify if Special Personnel Were Hired for Project	Actual Number of Grades Involved	Estimate Number of Students Involved	School Minutes per Week for this Activity. Indicate where Appropriate	Indicate from Code the Agency Most Helpful*	Indicate from Code Group Most Responsible for Causing Program to Begin*	Check those Innovations Which are to be Continued	Specify if Program is ACCELERATED or for SLOW LEARNERS	Indicate Judgment of the Effectiveness of Program				
									Excellent	Good	Fair	Not Working as Planned	Program Discontinued
a.													
b.													
c.													
d.													
e.													
f.													
g.													
h.													
i.													
j.													
k.													
l.													
m.													
n.													

ode details to complete Columns "F" and "G" listed on Page 7.

Part II—ELEMENTARY CURRICULAR OFFERINGS

Since the school year 1957-58, many local school systems have worked to up-date specific sections of their elementary school programs. Please specifiy below for the year or years involved, which of the following subject areas have been strengthened in your school.

1. Have there been any notable curriculum changes in the elementary school program in your building since the 1957-58 school year?

Yes.............. No..............

Note: Here we are concerned primarily with changes which have affected the curriculum of the elementary school program. Listed below are examples of changes which you may have introduced:
(Check year for which changes were made. If new practice was dropped, indicate by circling check for that year.)

	1957-58 Or Earlier	1958-59	1959-60	1960-61	1961-62	In Process 1962-63
a. Arithmetic						
b. Comparative Government						
c. Economic Education						
d. Foreign Languages						
e. Other Language Arts						
f. Physical Education						
g. Reading						
h. Science						
i. Social Studies						
j. Special Education (Specify Type)						
k. Writing						

Have there been any notable curriculum changes in other areas? If so, indicate below.

l.						
m.						
n.						

Code Details—Column F

Agency which provided most consultative assistance to local school with special projects.
Place the appropriate number from the list below in the appropriate squares on the previous page.

(1) Department of Public Instruction

(2) State Curriculum Committee of the Department of Public Instruction

(3) Colleges or Universities

(4) County Education Office

(5) Other School Districts

(6) Others (Specify)..

(7) ....

(8) ....

Code Details—Column G

Individual or group most responsible for causing program changes.
Place the appropriate number from the list below in the appropriate squares on the previous page.

(1) School Board

(2) Teachers

(3) Pupils

(4) Community Group

(5) Department of Public Instruction

(6) Colleges and Universities

(7) Superintendent

(8) Principal

(9) County Education Office

(10) Others (Specify)..

(11) ....

3. Please send any reports, materials, studies or articles which would support your appraisal that the innovations have improved the elementary program. Please indicate below what materials are being sent:

a. ....
....

b. ....
....

c. ....
....

d. ....
....

4. If you wish to describe in greater detail any elementary organization changes named herein, please do so on additional pages.

Exhibit 3

Correlations Between Cost Factors and Innovation Scores[1]

	Sev./Res.[2]	Membership	P/C Oper. Exp.[3]	Op. Millage	Innovation
Sev./Res.	1,000	.089	.65	-.09	-.11
Membership		1.000	.16	-.10	-.10
P/C Oper. Expense			1.00	-.44	-.21
Millage				1.00	-.14
Innovation					1.00

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[1] Childs, "A Study of the Belief Systems of Administrators and Teachers in Innovative and Non-Innovative School Districts," p. 60.

[2] State Equalized Evaluation Per Resident Pupil

[3] Current Expenditure Per Pupil

Exhibit 4

Comparison of Sample Systems on Selected Cost Factors and Constructed Innovative Score

	Constructed Innovative Score	Sev./Res.[1]	Membership	P/C[2] Exp.
Innovative System's Average	32.1	14,987.2	3,219.8	\$409.9
Non-Innovative System's Average	8.8	13,432.5	3,467.8	\$354.0

---

[1] State Equalized Evaluation Per Resident Pupil

[2] Current Expenditure Per Pupil

Exhibit 5

July 30, 1965

Mr.__________________
Superintendent of Schools
Name of District
Street Address
City, State

Dear Mr._____________:

The department of Education is cooperating with Mr. Allen Klingenberg, Assistant Professor of Education, Western Michigan University, in a study which is presently entitled, "Behavioral Differences Involved in the Process of Change in Michigan Schools." This study will be based on information the Department of Education gathered for its study of Five Years of Change in Michigan Public Schools published in 1964.

From the data collected in the original survey, Mr. Klingenberg has selected your school for further study. He will be contacting you personally within the next few days to discuss the matter further with you and to answer any questions you might have. The names of all school districts contacted and persons interviewed will remain confidential.

It would be helpful to Mr. Klingenberg if you would supply him with a list of principals who have served in your school system for three or more years. Please send this information to:

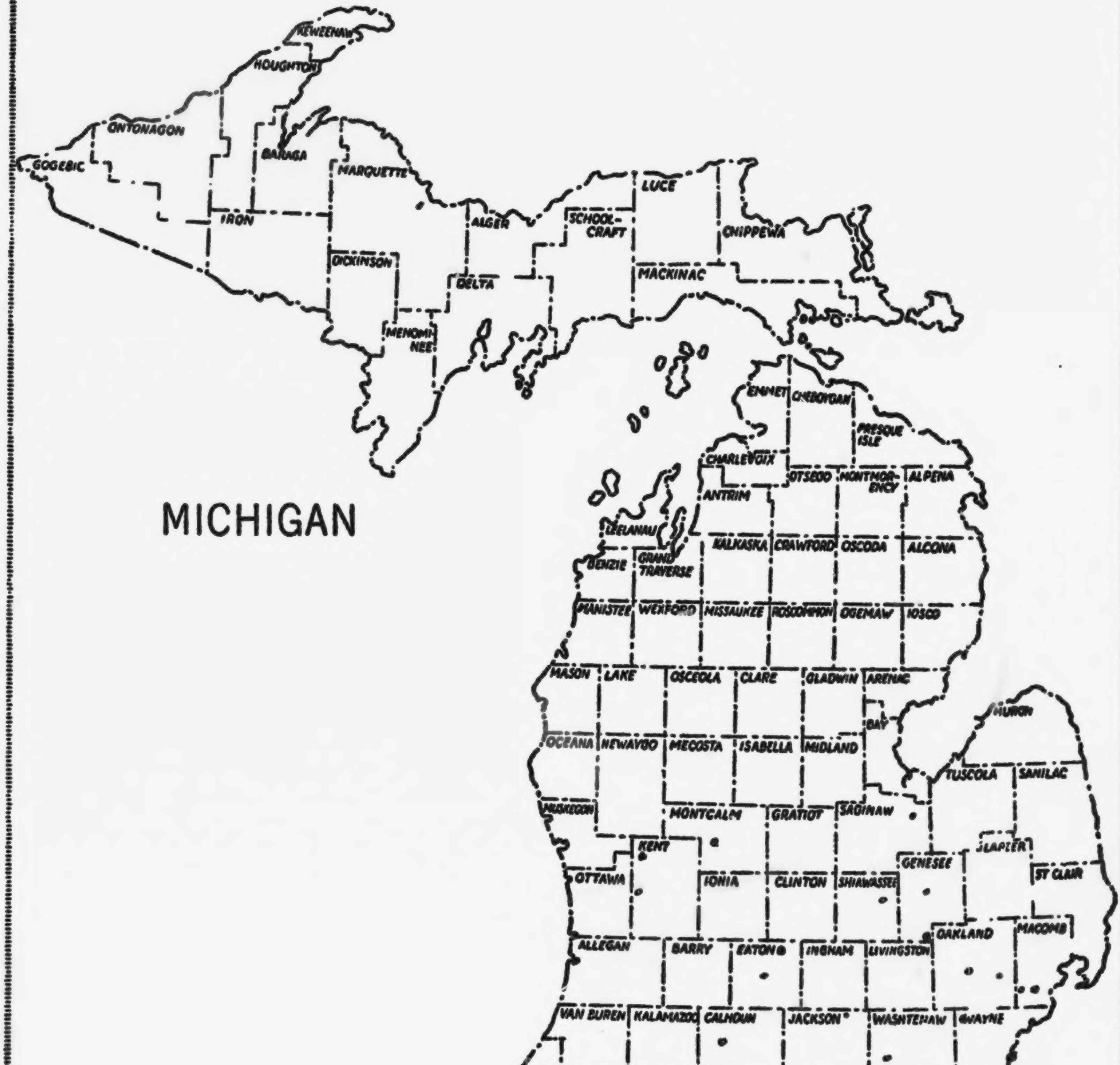
Mr. Allen Klingenberg
50 West 21 Street
Holland, Michigan

Your cooperation in this study will be very much appreciated.

Sincerely yours,

Alexander J. Kloster
Acting Superintendent

Exhibit 6


MICHIGAN
KEWEENAW
HOUGHTON
ONTONAGON
GOGEBIC
BARAGA
MARQUETTE
IRON
ALGER
SCHOOL-CRAFT
LUCE
CHIPPEWA
MACKINAC
DICKINSON
DELTA
MENOMI-NEE
EMMET
CHEBOYGAN
PRESQUE ISLE
CHARLEVOIX
OTSEGO
MONTMOR-ENCY
ALPENA
ANTRIM
LEELANAU
KALKASKA
CRAWFORD
OSCODA
ALCONA
BENZIE
GRAND TRAVERSE
MANISTEE
WEXFORD
MISSAUKEE
ROSCOMMON
OGEMAW
IOSCO
MASON
LAKE
OSCEOLA
CLARE
GLADWIN
ARENAC
HURON
BAY
OCEANA
NEWAYGO
MECOSTA
ISABELLA
MIDLAND
TUSCOLA
SANILAC
MUSKEGON
MONTCALM
GRATIOT
SAGINAW
KENT
LAPEER
OTTAWA
IONIA
CLINTON
SHIAWASSEE
GENESEE
ST CLAIR
ALLEGAN
BARRY
EATON
INGHAM
LIVINGSTON
OAKLAND
MACOMB
VAN BUREN
KALAMAZOO
CALHOUN
JACKSON
WASHTENAW
WAYNE
BERRIEN
CASS
ST JOSEPH
BRANCH
HILLSDALE
LENAWEE
MONROE

- Innovative Systems
- Non-Innovative Systems

Exhibit 7

Professional Background of the Administrators in This Study

	Administrators from Innovative Systems	Administrators from Non-Innovative Systems
High Cost Factor Systems	5 Superintendents	5 Superintendents
	28 Principals	34 Principals
	33 Administrators	39 Administrators
Low Cost Factor	5 Superintendents	5 Superintendents
	17 Principals	17 Principals
	22 Administrators	22 Administrators
Total Number of Administrators	10 Superintendents	10 Superintendents
	45 Principals	51 Principals
	55 Administrators	61 Administrators

Exhibit 8

SURVEY INSTRUMENT

1. How many years have you been in education as:
   a. A teacher?__________
   b. An administrator?__________
   c. Other?__________(Please specify______________________)

2. Indicate with an (x) your present position:
   ______ Elementary
   ______ Junior High School
   ______ Senior High School
   ______ Central Office

3. How many years have you been in your present position? ____

4. Indicate with an (x) how you were promoted to your present position:
   ______ From within the school system
   ______ From outside the school system

5. Indicate with an (x) the percentage which most clearly shows the amount of time you devote to introducing new educational practices, pertaining to the curriculum into your school or school system:

   ____
   0%   20%   40%   60%   80%   100%

6. What were two of the most significant new educational practices introduced by you and your staff during the past three years?

   a.

   b.

7. In comparison to administrators from school systems similar to your own: How much time do you spend introducing new educational practices pertaining to the curriculum? (Indicate the most appropriate response with an (x).)

   ________ Much More   ________ Slightly More   ________ The Same   ________ Slightly Less

   ________ Much Less

8. Indicate the number of graduate hours you have earned beyond your highest degree:
   ______ Beyond the Bachelor's
   ______ Beyond the Master's
   ______ Beyond the Specialist or Six-Year Degree
   ______ Beyond the Doctorate

Exhibit 8 (continued)

9. Indicate whether the hours earned in number 8 were:
______ Term hours
______ Semester hours
______ Quarter hours

10. Are you now enrolled in an advanced degree program?
______ Yes
______ No

11. If your response to number ten was yes: Indicate with an (x) which degree program you are enrolled in.
______ Master's
______ Specialist or Six-Year Program
______ Doctorate

GENERAL DIRECTIONS: In items 12-18 select only one response for each and indicate it with an (x).

12. How many professional conferences and workshops have you attended during the past three years?
______ 0
______ 1
______ 2
______ 3
______ 4
______ 5
______ 6
______ 7
______ 8
______ 9 or more

13. In how many of the professional conferences and workshops which you attended during the past three years did you actively participate in the planning and/or leadership of?
______ 0
______ 1
______ 2
______ 3
______ 4
______ 5
______ 6
______ 7
______ 8
______ 9 or more

14. In how many community organizations, other than those directly connected with the school, are you an active member?
______ 0
______ 1
______ 2
______ 3
______ 4
______ 5
______ 6
______ 7
______ 8
______ 9 or more

15. During the past three years how many offices have you held in community organizations?
______ 0
______ 1
______ 2
______ 3
______ 4
______ 5
______ 6
______ 7
______ 8
______ 9 or more

Exhibit 8 (continued)

16. In how many professional organizations are you an active member?

______ 0
______ 1
______ 2
______ 3
______ 4
______ 5
______ 6
______ 7
______ 8
______ 9 or more

17. During the past three years, how many offices have you held in professional organizations?

______ 0
______ 1
______ 2
______ 3
______ 4
______ 5
______ 6
______ 7
______ 8
______ 9 or more

18. How many professional journals do you read thoroughly?

______ 0
______ 1
______ 2
______ 3
______ 4
______ 5
______ 6
______ 7
______ 8
______ 9 or more

GENERAL DIRECTIONS: For each part of item 19 select only one response and indicate it with an (x).

19. In getting information concerning new educational practices (pertaining to the curriculum, I find:

a. GRADUATE COURSE IN EDUCATION

______ Extremely Useful	______ Often Useful	______ Somewhat Useful	______ Seldom Useful	______ Not Useful

b. PROFESSIONAL JOURNALS

______ Extremely Useful	______ Often Useful	______ Somewhat Useful	______ Seldom Useful	______ Not Useful

c. MASS MEDIA (Newspapers, Radio, T.V., etc.)

______ Extremely Useful	______ Often Useful	______ Somewhat Useful	______ Seldom Useful	______ Not Useful

d. SUGGESTIONS FROM MY TEACHING STAFF

______ Extremely Useful	______ Often Useful	______ Somewhat Useful	______ Seldom Useful	______ Not Useful

e. SUGGESTIONS FROM OTHER ADMINISTRATORS IN MY SCHOOL SYSTEM:

______ Extremely Useful	______ Often Useful	______ Somewhat Useful	______ Seldom Useful	______ Not Useful

Exhibit 8 (continued)

19. continued

f. VISITS TO OTHER SCHOOL SYSTEMS

Extremely Useful	Often Useful	Somewhat Useful	Seldom Useful	Not Useful

g. CONTACTS WITH ADMINISTRATORS FROM OTHER SCHOOL SYSTEMS

Extremely Useful	Often Useful	Somewhat Useful	Seldom Useful	Not Useful

h. CONTACTS WITH EDUCATIONAL MATERIALS REPRESENTATIVES

Extremely Useful	Often Useful	Somewhat Useful	Seldom Useful	Not Useful

i. CONTACTS WITH THE STATE DEPARTMENT OF EDUCATION

Extremely Useful	Often Useful	Somewhat Useful	Seldom Useful	Not Useful

j. CONTACTS WITH THE UNITED STATES OFFICE OF EDUCATION

Extremely Useful	Often Useful	Somewhat Useful	Seldom Useful	Not Useful

Exhibit 9

Mr. ____________________
Superintendent of Schools
School District
Street Address
City, State

Dear Mr. __________:

Thank you for consenting to serve in the state wide study of educational change being conducted by Al Klingenberg of Western Michigan University for the Department of Public Instruction. When the study is completed, you will receive a copy of the results.

In the near future you will receive a packet containing survey instruments for you and the principals indicated below who have served as administrators in your school system for three or more years. The instruments require about eight minutes to complete. All responses are confidential and a stamped envelope is included inside each instrument for convenient return.

It is very important that all the instruments be completed and returned so that the results will be complete. It would be deeply appreciated if you would:

1. Distribute the survey instruments at your next staff meeting or before if the opportunity presents itself to yourself and these principals who have been in your school system for at least three years:

   (Names of Principals)

2. Personally request those participating to complete the instrument at once and return in the envelope provided.

I will be contacting you personally in the near future by either telephone or letter to arrange a brief interview with you at your convenience. Your cooperation is greatly appreciated.

Sincerely,

Al Klingenberg

Exhibit 10

October 20, 1965

Mr. ________________
Superintendent of Schools
School District
Street Address
City, State

Dear Mr. __________:

These are the survey instruments referred to in my letter of October 18, 1965. Would you and the following principals complete and return these in the envelopes provided by November 5, 1965.

(Name of Principals)

Your cooperation in this study is greatly appreciated.

Sincerely,

Al Klingenberg

Exhibit 10

October 27, 1965

Dear Sir:

Earlier this year your school system agreed to serve as part of the sample in a state-wide study of educational change being conducted for the Michigan Department of Public Instruction by Al Klingenberg, School of Education, Western Michigan University. A large amount of the data needed in this study will result from the survey instrument before you.

The time needed to complete this survey instrument is between five and ten minutes. Most of the items require an (x) response in front of the appropriate alternative. In completing this survey please respond as accurately as possible. Your responses will be kept completely confidential.

The findings of this study will be made available to you as soon as the data is analyzed. I'm sure that you are aware that the results of the study will be more complete if all the survey instruments are returned. Thus, you will find a stamped return envelope inside the survey instrument for your convenience.

Your cooperation will be greatly appreciated in completing and returning this survey as quickly as possible.

Sincerely,

Al Klingenberg

AK/dc

Exhibit 11

Non-Structured Interview Format

Mr. _________: The purpose of this study is to investigate a number of factors involved in educational change in selected Michigan School Districts.

I. Selected rapport facilitating items:

   A. Tell me how you have organized your staff for curriculum improvement?

   B. Which parts of the organization are permanent? Why?

   C. Can you tell me how many of your staff members are actively involved in curriculum studies of some type now? Is this the usual number?

   D. Do you feel that wide staff participation is necessary? Why?

   E. Who determines the areas of investigation for each of your study groups?

   F. Who determines which staff members will work in each group? Why this method?

   G. Describe the major functions of these curriculum study groups.

II. Selected change process items:

Reconstruct for me as accurately as possible, how you and your teaching staff instituted a new educational practice. You might begin with who in your school system first became aware of the new practice.

   A. Awareness and interest cueing items:

      1. Which segments of your staff, teachers or administrators, first become aware of most new ideas? Why would you say this?

      2. Once individuals in your school system become aware of a new idea, who really has to become interested in it before the staff as a whole or particular segments of it consider the idea?

      3. Tell me, who determines whether the idea might work in your school system? (Principals, Administrative Council, You)

Exhibit 11 (continued)

B. Curriculum organization process cueing items:

1. How was the curriculum study group made up? Why in this manner?

2. Tell me how the leadership role was filled? Why in this manner?

3. Tell me if you involve the public in any way in curriculum study? How? Why is it important?

4. What special provisions are made for curriculum study groups?

    a. Is time set aside?

    b. What provisions of aid are made?

    c. What special personnel are used to assist in the study?

    d. Others?

C. Administrator's role in curriculum change process cueing items:

1. When the staff is studying a problem, how do you and your administrative assistants work with the group? Why in this way?

2. Tell me the extent it is necessary for you and your administrative assistants to take a direct approach at times in changing the curriculum?

3. Do you think that change in your system usually emerges from administrative direction, or from the emerging ideas of the teaching staff? Why?

4. Tell me, do you feel that a direction from the administration will make significant change in your district's curriculum? Why?

D. End product of curriculum study cueing items:

1. What is the end product of the curriculum study group? Why?

2. Once a curriculum group has studied a problem, who and by what means determines whether the new idea should be adopted by your district? Explain.

Exhibit 11 (continued)

3. What factors are of crucial importance to you in making the final decisions concerning new ideas suggested by your staff? Can you rank in order of importance these items and why you place them there?

    a. Child Welfare

    b. Staff Commitments

    c. Research

    d. Money

    e. Others

4. Tell me, how you explain if you cannot accept the staff's recommendations? Is this really necessary? How do they react?

5. Have you ever felt that your teaching staff's involvement in curriculum study isn't really as necessary as textbooks in school administration say? Why do you feel this way?

6. Tell me, to what extent can the administrator neglect the wishes of his staff and continue to have them strive diligently for curriculum change? Explain.

E. Curriculum changes that failed cueing items:

1. Tell me about a curriculum change which failed? How did you handle it?

2. Who arrived at the decision as to the actual failure?

3. What in your opinion caused the failure? Explain.

4. Who took responsibility for the failure? Explain.

F. Climate needed for curriculum change cueing items:

1. Tell me, what type of climate is necessary in order for your staff to be favorable to new curriculum ideas? Explain.

2. How do you see yourself and other administrators fostering this climate in your system?

Exhibit 11 (continued)

3. Tell me, what amount of trust is necessary between administrators and teaching staff in order for curriculum change to occur?

4. To successfully change an aspect of the curriculum must all staff members participate in the change? Explain where staff participation is really needed.

5. If a teacher in one of your schools has an idea she wants to try, can she? To what extent can she?

6. What if the rest of the staff isn't interested in the staff members idea? Can she still try it?

7. Tell me, how do you handle new programs which the public criticizes? Explain.

G. Methods of encouraging change cueing items:

1. Tell me, how you encourage your staff to become familiar with new ideas?

2. Tell me, which method do you feel is best for introducing new practices into the curriculum? Rapid transfer or gradual introduction? Explain.

3. Do you feel that all staff members must change once you adopt a new practice? Explain.

4. Describe your methods for working with staff members who won't change. Explain.

H. Resistance to change cueing items:

1. Tell me, how do you react to teachers and administrators who are set in their ways? How do you work with them?

2. Tell me, do you feel that it is good to have some staff members who are reluctant to change? Why?

I. What type of staff members do you seek cueing items:

1. What do you look for in a teacher? Explain.

2. What do you look for in administrators? Explain.

3. Do you feel that all people want to improve? Explain.

Exhibit 11 (continued)

4. Do you feel that some people have to be prodded to change? Explain.
5. How do you show that you value everyone's capacity to contribute? Explain.
6. Tell me, do you find it useful to recognize teachers for trying new educational practices? Explain why.

Exhibit 12

Interview Data Categorization Guidelines

The interview transcripts were analyzed to isolate appropriate data on fifteen predetermined dimensions. The data was categorized as indicating "high," "non-determinant" or "low" indications of the behavior described on the dimension. The general criteria used for classification of data is indicated below with specific criteria specified after each of the fifteen dimensions.

1. The consistency of the administrator's response on each dimension was considered important. The administrator's behavior was judged as "non-determinant" if more than one contradiction or reversal was found on any particular dimension.
2. If the administrator's statements and actions in curriculum change situations indicated that he highly values the behavior described by the dimension, his behavior was judged "high" on the dimension.
3. The administrator was judged "low" on the dimension if he made generalizations which indicated that he didn't value the behavior on the dimension and his behavior in curriculum change situation supports this.

The dimensions upon which the twenty superintendents in the study were measured consisted of the degree that they:

1. recognized the value of praising their teaching staff for contributions to curriculum improvement.

   H: N: L:

   In general mark H when:

   a. the administrator's statements indicate that the teaching staff is consistently praised for its contributions to curriculum change.

   b. the administrator indicates that he highly values this action.

   c. the administrator's behavior indicates that he uses specific techniques to show that the teaching staff is praised for its contributions to curriculum change.

   In general mark L when there is no strong evidence of the above actions.

Exhibit 12 (continued)

2. recognized the teaching staff's ability to contribute to the improvement of the local curriculum.

   H: N: L:

   In general mark H when:

   a. the administrator's statements indicate a consistent pattern of important teaching staff contributions to the improvement of the local curriculum.

   b. there are indications that the teaching staff is used to contribute and investigate new curriculum practices.

   In general mark L when there is no significant evidence of the above.

3. recognized the teaching staff's sincerity in efforts to improve the curriculum.

   H: N: L:

   In general mark H when:

   a. administrator's statements indicate that the teaching staff constantly strives to improve the curriculum.

   b. administrator's statements indicate faith in the teaching staff's ability and desire to improve the curriculum.

   c. administrator's statements indicate a number of new practices which resulted from teaching staff's efforts.

   In general mark L when there is no significant evidence of the above.

4. recognized the value of giving the teaching staff's desires and feelings prime consideration when decisions concerning new curriculum practices were made.

   H: N: L:

   In general mark H when:

   a. the administrator indicates with his statements that the wishes and desires of the staff are given high consideration when decision-making situations concerning curriculum practices arise.

Exhibit 12 (continued)

b. the administrator indicates by examples how the teaching staff's desires and feelings concerning new curriculum were highly valued in the decision-making process.

In general mark L when there is no significant evidence of the above.

5. recognized the value of diversity in teachers' methods.

H: N: L:

In general mark H when:

a. administrator statements mention a high valuing of individual behavior by the teaching staff.

b. administrators show by example that the teaching staff is given time to implement new curriculum practices.

In general mark L when there is no significant evidence of the above situations.

6. recognized the value of utilizing the teaching staff in leadership positions when improving the curriculum.

In general mark H when:

a. administrator's statements indicate many curriculum improvements groups being led by teachers rather than administrators.

b. administrator's examples show many teachers holding leadership positions in curriculum improvement studies.

In general mark L when there is no significant evidence of the above.

7. recognized the value of providing support to the teaching staff:

a. prior to the institution of curriculum practices.

H: N: L:

b. during the institution of curriculum practices.

H: N: L:

Exhibit 12 (continued)

In general mark H when:

c. there are indications that the teaching staff is provided with resources and training prior to the actual curriculum change.

d. there are indications that the teaching staff is given assistance when implementing new curriculum change.

In general mark L when there is no significant evidence of the above.

8. recognized the value of providing interested teaching staff members with the opportunity to experiment with new curriculum practices.

H: N: L:

In general mark H when:

a. administrator's statements indicate that one or more teachers are using curriculum practices not adopted on a system's wide basis.

b. administrator's statements indicate that they highly value teaching staff members experimenting with new or different approaches.

In general mark L when there is no significant evidence of the above.

9. recognized the value of providing the teaching staff with released time to improve the curriculum.

H: N: L:

In general mark H when:

a. administrator's statements indicate that the teaching staff is provided with released time more than twice a year.

b. administrators indicate that "system-wide committee members" are provided with substitutes during the regular school day when attending meetings.

c. administrators provide examples where groups have released time to improve the curriculum.

In general mark L when there is no significant evidence of the above.

Exhibit 12 (continued)

10. recognized the necessity for justifying the rejection of teaching staff recommendations for curriculum improvement.

    H: N: L:

    In general mark H when:

    a. administrator's indicate by their actions that they give frank explanations when unable to institute curriculum recommendations of their teaching staff.

    b. administrators mention that all or part of all staff curriculum recommendations are implemented and indicate with examples that they act this way.

    In general mark L when there is no significant evidence of the above.

11. recognized as a crucial consideration teaching staff commitment and readiness when deciding whether to support or reject a staff curriculum recommendation.

    H: N: L:

    In general mark H when:

    a. the administrator states that this is one of his prime considerations when deciding to implement or reject staff curriculum recommendations.

    b. there are examples provided by the administrators which indicate that staff commitment and readiness influenced the decision to either reject or implement a curriculum change.

    In general mark L when there is no significant evidence of the above.

12. recognized the value of encouraging their teaching staff not to fear mistakes when trying new curriculum practices.

    H: N: L:

    In general mark H when:

    a. the administrator indicates with consistent statements that he desires his staff to experiment with new practices.

Exhibit 12 (continued)

b. the administrator recognizes that all curriculum practices tried will not succeed.

c. the administrator recognizes that the failure of an innovation isn't necessarily the fault of the teaching staff.

In general mark L when there is no significant evidence of the above.

13. recognized the value of creating a climate for change where the teaching staff's desires are placed before material questions in curriculum decision-making.

H: N: L:

In general mark H when:

a. the administrator states that the teaching staff is the prime source for new curriculum ideas.

b. the administrator indicates by example and statements that the teaching staff makes significant contributions to curriculum improvements.

c. the administrator indicates that the budget isn't the prime source for determining curriculum decisions.

In general mark L when there is no significant evidence of the above.

14. recognized the value of facilitating teaching staff involvement in the curriculum change process rather than dominating it.

H: N: L:

In general mark H when:

a. the administrators indicate by their statements that real change must come from the teaching staff through direct involvement.

b. the administrators indicate by example that they help the staff arrive at new curriculum practices rather than directing them to new practices.

Exhibit 12 (continued)

c. the administrators indicate that their role is to provide the environment in which the staff will themselves arrive at the decisions to change curriculum practices.

In general mark L when no significant evidence of the above is presented.

15. recognized the value of a teaching staff committed to helping each student develop to his full capacity over those who value the achievement of arbitrary subject matter standards.

H: N: L:

In general mark H when:

a. the administrators indicate by statements what they desire teachers who are interested in each student first and foremost.

b. the administrators indicate by statements that they desire teachers who can work with people.

c. the administrators indicate by statements that subject matter competence isn't enough when selecting new teaching staff members.

In general mark L when no significant evidence of the above is found.

BIBLIOGRAPHY

BOOKS

Association for Supervision and Curriculum Development, NEA. Perceiving Behaving Becoming. 1962 Yearbook, Washington, D.C.: Association for Supervision and Curriculum Development, NEA, 1962.

Brickell, Henry M. Organizing New York State for Educational Change. Albany, New York: University of the State of New York, State Education Department, 1962.

Buley, Hilton C. Administration for Adaptability. edited by Donald H. Ross. New York: Metropolitan School Study Council, Teachers College, Columbia University, 1958.

Carlson, Richard O., and Others. Change Processes in the Public Schools. Eugene, Oregon: University of Oregon Press, 1965.

Carlson, Richard O. "School Superintendents and Adoption of Modern Math: A Social Structure Profile," Innovation in Education. edited by Matthew B. Miles. New York: Bureau of Publications, Teachers College, Columbia University, 1964.

Dixon, Wilfred J. and Frank J. Massey. Introduction to Statistical Analysis. New York: McGraw-Hill Book Company, 1951.

Guest, Robert H. Organizational Change: The Effects of Successful Leadership. Homewood, Illinois: Dorsey Press, Inc., 1962.

Hayes, William L. Statistics for Psychologists. New York: Holt, Rinehart, and Winston, 1963.

Jenkins, David H. and Charles A. Blackman. Antecedents and Effects of Administrative Behavior. Columbus, Ohio: College of Education, Ohio State University, 1956.

Mackenzie, Gordon N. "Curricular Change: Participants, Power, and Process," Innovation in Education. edited by Matthew B. Miles. New York: Bureau of Publications, Teachers College, Columbia University, 1964.

McClellen, George B. Administration for Adaptability. Edited by Donald H. Ross. New York: Metropolitan School Study Council, Teachers College, Columbia University, 1958.

Michigan Department of Public Instruction. Five Years of Change in the Public Elementary and Secondary Schools in Michigan. Lansing, Michigan: 1964.

Miles, Matthew B. Innovation in Education. New York: Bureau of Publications, Teachers College, Columbia University, 1964.

Mort, Paul R. Administration for Adaptability. Edited by Donald H. Ross. New York: Metropolitan School Study Council, Teachers College, Columbia University, 1958.

Mort, Paul R. and Francis G. Cornell. American Schools in Transition. New York: Bureau of Publication, Teachers College, Columbia University, 1941.

Rogers, Everett M. Diffusion of Innovations. New York: The Free Press of Glenco, 1962.

Ross, Donald H. Administration for Adaptability. Revised Ed. New York: Metropolitan School Study Council, 1958.

Siegel, Sidney. Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill Book Company, Inc., 1956.

Skogsberg, Alfred H. Administration for Adaptability. Edited by Donald H. Ross. New York: Metropolitan School Study Council, Teachers College, Columbia University, 1958.

State of Michigan. General School Laws. Lansing, Michigan: Speaker-Hines and Thomas, Inc., 1960.

PERIODICALS

Carlson, Richard O. "Succession and Performance Among School Superintendents," Administrative Science Quarterly, VI, No. 2, (September 1961).

Eichholz, Gerhard. "Why Do Teachers Reject Change?" Theory Into Practice, II, No. 5, (December 1963).

Rogers, Everett M. "What Are Innovators Like?" Theory Into Practice, II, No. 5, (December 1963).

OTHER SOURCES

Carlson, Richard O. "Career and Place Bound School Superintendents: Notes on the Adoption of Innovations, Positions in Social Structure, and Reference Groups." Unpublished Manuscript, Institute for Community Studies, University of Oregon, 1964.

Childs, John W. "A Study of the Belief Systems of Administrators and Teachers in Innovative and Non-Innovative School Districts." Unpublished Ph. D. Dissertation, Michigan State University, East Lansing, Michigan: 1965.

Dementer, Lee H. "Accelerating the Local Use of Improved Educational Practices in School Systems." Unpublished Ph. D. Dissertation, New York: Teachers College, Columbia University, 1951.

Gallagher, Ralph P. "Some Relationships of Symbiotic Groups to Adaptability in Public Schools and to Other Related Factors." New York: Unpublished Ed. D. Project, Teachers College, Columbia University, 1949.

Haber, Ralph N. "The Spread of An Innovation: High School Language Laboratories." Unpublished Paper, New Haven, Connecticut: Yale University, 1961.

Havens, A. E. A Review of Factors Related to Innovativeness. Ohio Agricultural Experiment Station Mimeo Bulletin 329. Columbus, Ohio: (February 1962).

Husk, William L. "An Exploratory Study of Possible Relationships Between the Educational and Professional Backgrounds of School Superintendents and Their Views of Instructional Improvement." Unpublished Ed. D. Dissertation, East Lansing, Michigan: Michigan State University, 1964.

Meuller, Van. "A Study of Relationships between Teacher-Administrative Perceptions of Educational Quality Measured by Educational Characteristics Criterion "ECC" and Selected Cost Factors." Unpublished Ph. D. Dissertation, East Lansing, Michigan: Michigan State University, 1964.

Miller, Richard I. "Program of Educational Change." Unpublished Working Paper, Lexington, Kentucky: University of Kentucky, December 1964.

North Central Rural Sociology Subcommittee for the Study of Diffusion of Farm Practices. Adopters of New Farm Ideas: Characteristics and Communications Behavior. Ames, Iowa: North Central Regional Extension Publication No. 13, (October, 1961).

Rogers, Everett M. Bibliography of Research on the Diffusion of Innovations. East Lansing, Michigan: Michigan State University, College of Communications Arts, 1964.

Rogers, Everett M. Characteristics of Agricultural Innovators and Other Adopter Categories. Wooster, Ohio: Ohio Agricultural Experiment Station Bulletin 882, May 1961.

Rogers, Everett M. "On Innovations and Education." A paper presented at the Conference of Michigan Cooperative Curriculum Program, Boyne Mountain, Michigan: (September 24, 1965).